Commonwealth of Kentucky
Environmental and Public Protection Cabinet
Department for Environmental Protection
Division for Air Quality
803 Schenkel Lane
Frankfort, Kentucky 40601
(502) 573-3382

AIR QUALITY PERMIT

Issued under 401 KAR 52:020

Permittee Name:	**Logan Aluminum, Inc.**
Mailing Address:	**P.O. Box 3000, U.S. Highway 431 North** **Russellville, KY 42276**
Source Name:	**Same as above.**
Mailing Address:	**Same as above.**
Source Location:	**Same as above.**
Permit Number:	**V-03-017 (Revision 1)**
Log Number:	**55244 (Original), 56103 (Revision 1)**
Review Type:	**Title V**
Source ID #:	**21-141-00038**
Regional Office:	**Bowling Green Regional Office** **1508 Westen Avenue** **Bowling Green, KY 42104-3356** **(270) 746-7475**
County:	**Logan**
Application Complete Date:	**December 15,2002 (Original), July 26, 2004 (Revision 1)**
Issuance Date:	**June 17, 2003**
Revision 1 Date:	
Expiration Date:	**June 17, 2008**

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John S. Lyons, Director
Division for Air Quality

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Definitions: The following definitions apply to all abbreviations and variables used in this permit:

PT – total particulate matter
PM10 – particulate matter equal to or smaller than 10 micrometers
CO – carbon monoxide
NO_x – nitrogen oxides
SO_2 – sulfur dioxide
Pb – lead
VOC – volatile organic compounds

Rev #	Permit type	Log #	Complete Date	Issuance Date	Summary of Action
----	Initial Issuance	55244	12/15/02	06/17/03	Renewal/Construction
1	Significant revision	56103	7/26/04		Modification

SECTION A – PERMIT AUTHORIZATION

Pursuant to a duly submitted application the Kentucky Division for Air Quality hereby authorizes the operation of the equipment described herein in accordance with the terms and conditions of this permit. This permit has been issued under the provisions of Kentucky Revised Statutes Chapter 224 and regulations promulgated pursuant thereto.

The permittee shall not construct, reconstruct, or modify any affected facilities without first having submitted a complete application and received a permit for the planned activity from the permitting authority, except as provided in this permit or in 401 KAR 52:030, Federally-enforceable permits for non-major sources.

Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by this Cabinet or any other federal, state, or local agency.

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

GROUP REQUIREMENTS: Scalping, Sorting and Conveying

Description: Before melting, aluminum ingots and scrap are scalped to remove surface impurities and sorted using three cyclones. Scalped scrap is blown into 6 storage silos were it is then gravity fed and conveyed to either the Electric Induction Furnace or the Swarf Furnace. The cyclones do not act as control equipment.

Unit ID#	Unit Name	Construction Commenced
05 (2005-1A-C)	Scalper 1	June 15, 1981
05 (2005-1A-C)	Cyclones 1, 2	June 15, 1981
05 (2005-1A-C)	Cyclone 3	February 2, 1994
25 (1009-1)	Swarf Furnace Chip Conveyor	November 15, 1997

APPLICABLE REGULATIONS:
401 KAR 59:010 New process operations

1. **Operating Limitations:** Total material processed shall not exceed the following limits:

Unit ID#	Unit Name	P'_{hri} (lbs/hr)	P'_{an} (tons/yr)
05 (2005-1A-C)	Scalper 1	424,000	1,210,000
25 (1009-1)	Swarf Furnace Chip Conveyor	20,000	61,000

Where i is the month, P'_{hri} is the allowable hourly processing rate averaged over month i (pounds/hour) and P'_{an} is the allowable 12-month rolling total material processed (tons/year).

Compliance Demonstration: Compliance with the limits described above shall be determined by comparing the allowable rate to the actual rate as calculated in **SECTION D 1.b.** below.

2. **Emission Limitations:**

a. Visible emissions shall not equal or exceed 20% opacity [401 KAR 59:010, Section 3(1)(a)].

b. Particulate emissions shall not exceed the following limits:

Unit ID#	Unit Name	E'_{PMi} (lbs/hr)	E'_{PMan} (tons/yr)
05 (2005-1A-C)	Scalper 1	40.79	178.64
25 (1009-1)	Swarf Furnace Chip Conveyor	6.0	26.28

Where i is the month, E'_{PMi} is the allowable hourly particulate emission rate averaged over month i (pounds/hour) and E'_{PMan} is the allowable 12-month rolling total particulate emission rate (tons/year).

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Compliance Demonstration: Compliance with the limits described above shall be determined by comparing the allowable rate to the actual rate as calculated in **SECTION D 2.c.** below.

c. See **SECTION B page 68** below.

d. See **SECTION D 2.g.** below.

3. **Testing Requirements:** See **SECTION D 3.** below.

4. **Specific Monitoring Requirements:** The permittee shall monitor the following:

a. Monthly and 12-month rolling total hours of operation.

b. Hourly processing rate (based on monthly average).

c. 12-month rolling total material processed.

d. Hourly pollutant emission rates (based on monthly average).

e. 12-month rolling total pollutant emissions.

f. Monthly visible emissions using EPA Reference Method 9.

5. **Specific Recordkeeping Requirements:** The permittee shall retain records of the following:

a. Monthly and 12-month rolling total hours of operation.

b. Hourly processing rate (based on monthly average).

c. 12-month rolling total material processed.

d. Hourly pollutant emission rates (based on monthly average).

e. 12-month rolling total pollutant emissions.

f. Monthly visible emissions using EPA Reference Method 9 (records kept for 2 years).

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

6. Specific Reporting Requirements:

a. The permittee shall report all visible emissions readings in excess of the 20% limit specified in this permit semi-annually to the Division's Bowling Green Regional office.

b. See **SECTION D 6.a.** below.

7. Specific Control Equipment Conditions: Cyclones 1-3 are an integral part of the process and shall not be considered as control equipment.

8. Alternate Operating Scenarios: NA

9. Compliance Schedule: NA

10. Compliance Certification Requirements: See **SECTION D 10.a.** below.

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Emissions Unit: 44 (1003-1) Sow Dryer

Description: The Sow Dryer removes moisture from pigs and sows prior to melting. The dryer has six burners rated at 5 MMBtu/hr each. The dryers use natural gas as the primary fuel and propane as a backup.

Construction commenced: September 1998

APPLICABLE REGULATIONS:
None

1. **Operating Limitations:**

   a. Total natural gas usage shall not exceed 257.6 $MMft^3/yr$.

      Compliance Demonstration: Compliance with the limits described above shall be determined by comparing the allowable rate to the actual rate as calculated in **SECTION D 1.c.** below.

   b. See **SECTION D 1.d.** below.

2. **Emission Limitations:** None

3. **Testing Requirements:** None

4. **Specific Monitoring Requirements:** The permittee shall monitor the following:

   a. Monthly and 12-month rolling total hours of operation.

   b. Monthly fuel usage.

5. **Specific Recordkeeping Requirements:** The permittee shall retain records of the following:

   a. Monthly and 12-month rolling total hours of operation.

   b. Monthly fuel usage.

6. **Specific Reporting Requirements:** See **SECTION D 6.a.** below.

7. **Specific Control Equipment Conditions:** NA

8. **Alternate Operating Scenarios:** NA

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

9. **Compliance Schedule:** NA

10. **Compliance Certification Requirements:** See **SECTION D 10.a.** below.

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Emission unit: 26 (1009-1A-C) Swarf Furnace with Molten Metal Holder

Description: In the Swarf Furnace, scalped chips and light gauge scrap are melted, treated with reactive flux, tapped into crucibles and added to any of the three Direct Chill Line Melting Furnaces or the Reservoir Furnace. Emissions from this unit are controlled by a dedicated lime-injected baghouse. Under 40 CFR Part 63 Subpart RRR, the Swarf Furnace is classified as a Group 1 Furnace.

Construction commenced: November 15, 1997

APPLICABLE REGULATIONS:
401 KAR 53:010 Ambient Air Quality Standards.
401 KAR 59:010 New process operations
40 CFR Part 63 Subpart RRR Secondary Aluminum Production NESHAP

1. Operating Limitations:

a. The permittee shall operate the furnace within the range of charge materials, contaminant levels and parameter values established in the Site-Specific Monitoring Plan (SSMP).

b. Total aluminum production shall not exceed 25,000 lbs/hr and 80,000 tons/yr.

Compliance Demonstration: Compliance with the limits described above shall be determined by comparing the allowable rate to the actual rate as calculated in **SECTION D 1.b.** below.

c. Total chlorine usage shall not exceed 3.31 lbs/ton of aluminum processed.

Compliance Demonstration: Compliance with the limits described above shall be determined each day by:
i. Calculating total chlorine added as salt flux and
ii. Comparing the allowable rate to the actual rate as calculated below:

$$F = \frac{F_{cy}}{P_{cy}}$$

Where F is the average fluxing rate per operating cycle (pounds HCl/ton aluminum processed), F_{cy} is the total HCl added per operating cycle (pounds/cycle) and P_{cy} is the total aluminum processed (tons/cycle).

d. The permittee shall maintain a reactive flux injection rate at or below rate used during the performance test for each operating cycle or time period used in the performance test.

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

e. The permittee shall add reactive flux only to the side-well of the furnace unless emissions from the hearth are also controlled.

f. The permittee shall operate side-well furnaces such that the level of molten metal is above the top of the passage between the side-well of the furnace unless emissions from the hearth are also controlled.

g. Total natural gas usage rate shall not exceed 200.00 $MMft^3$/yr.

Compliance Demonstration: Compliance with the limits described above shall be determined by comparing the allowable rate to the actual rate as calculated in **SECTION D 1.c.** below.

h. The permittee shall design and install an emission capture and collection system in accordance with "Industrial Ventilation: A Handbook of Recommended Practice" and operate the system in accordance with the Operation, Maintenance, and Monitoring plan (OM&M plan):

i. For continuous lime-injection systems, the permittee shall:
- Maintain free-flowing lime in the feed hopper or silo at all times;
- Maintain the feeder setting at the level established during the performance test for continuous injection systems; and
- Maintain the alarm system (triboelectric flow indicator - notifies if the lime is not flowing) in good operating condition at all times.

ii. The permittee shall maintain the average fabric filter inlet temperature for each 3-hour period at or below the average temperature established during the performance test, plus 14^0C (plus 25^0F).

iii. The permittee shall install and operate a bag leak detector system such that the alarm does not sound more than 5% of operating time in any 6-month period.

iv. Should the bag leak detector sound and alarm, the permittee shall initiate corrective action within 1 hour and complete the corrective action procedures in accordance with the OM&M plan.

i. The permittee shall install and operate a device that measures and records the weight of all materials fed/charged and/or aluminum produced to an accuracy of ± 1%. The weight measurement device shall be calibrated according to manufacturer's specifications or at least once every 6 months.

j. The permittee shall develop diagrams and labels for each unit showing the information required by 40 CFR 63 Subpart RRR. The information will be stored in Logan Aluminum's database and retrievable at any computer in the plant. Each workstation shall have computer access.

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

k. See **SECTION D 1.d.** below.

2. Emission Limitations:

a. Visible emissions shall not equal or exceed 20% opacity [401 KAR 59:010, Section 3(1)(a)].

b. Particulate emissions shall not exceed 6.0 lbs/hr and 26.28 tons/yr.

Compliance Demonstration: Compliance with the limits described above shall be determined by comparing the allowable rate to the actual rate as calculated in **SECTION D 2.c.** below.

c. Pursuant to 40 CFR 63 Subpart RRR, the source has a choice to limit emission from Group 1 Furnaces on an individual basis or as part of a Secondary Aluminum Processing Unit (SAPU). As individual units, emissions from any Group 1 Furnace shall not exceed the following limitations:

i. Particulate emissions shall not exceed 0.4 lbs/ton of feed.
ii. Hydrochloric acid (HCl) emissions shall not exceed 0.4 lbs/ton of feed.
iii. Dioxin/furan (D/F) emissions shall not exceed 15.0 μg TEQ/Mg of feed.

Compliance Demonstration: Compliance with the limits described above shall be determined by comparing the allowable rate to the actual rate as calculated below:

$$X = \frac{E_X}{P}$$

Where X is the production-based emission rate of each limited pollutant (pounds/ton aluminum charged), E_X is the actual hourly emission rate of pollutant X as determined during a performance test (pounds/hour) and P is the actual total aluminum charged during the performance test (tons/hour).

If the source cannot or chooses not to demonstrate compliance with the individual limits above, Logan Aluminum shall maintain a 3-day rolling average of the SAPU emission limits as described in **SECTION D 2.f.** below.

d. Pursuant to 401 KAR 53:010 Section 1, fluoride emissions shall not cause an exceedance of the following secondary standards:

i. The 12-hour average of 3.68 ug/m^3
ii. The 24-hour average of 2.86 ug/m^3
iii. The one week average of 1.64 ug/m^3
iv. The one month average of 0.82 ug/m^3

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Compliance Demonstration: Compliance with the fluoride ambient air quality standard shall be determined through monitoring and record keeping.

e. See **SECTION B page 68** below.

f. See **SECTION D 2.h.** below.

3. Testing Requirements:

a. Logan Aluminum shall conduct a performance test before the year 2007 to measure particulate, HCl and D/F emissions at the outlet of the control device (baghouse). The results of the performance tests shall be used to establish emission rates (pounds/ton of feed/charge) to be used to demonstrate compliance with the limits described in **2.c.** above.

b. See **SECTION D 3.** below.

4. Specific Monitoring Requirements: The permitee shall monitor the following:

a. Monthly and 12-month rolling total hours of operation.

b. Hourly aluminum production rate (based on monthly average).

c. 12-month rolling total aluminum production.

d. Hourly pollutant emission rates (based on monthly average).

e. Production-based pollutant emission rates.

f. 12-month rolling total pollutant emissions.

g. Monthly fuel usage.

h. Monthly visible emissions using EPA Reference Method 9.

i. For each operating cycle or time period used in the performance test, the following parameters:
   i. Total fluxing hours per operating cycle.
   ii. Total HCl added by weight per operating cycle.
   iii. Hourly fluxing rate (based on operating cycle average).
   iv. Other parameters needed to perform alternative flux injection rate determination as described in 40 CFR Part 63 Subpart RRR section 63.1510(j)(5).

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j. Time, weight and type of reactive flux added or injected daily while reactive fluxing occurs.

k. Molten aluminum level in the sidewell using a radar level, which shall be certified every 6 months.

l. The permittee shall:
   i. Perform an annual inspection of all emission capture, collection, and transport systems to ensure that systems continue to operate in accordance with ACGIP standards.
   ii. Perform a monthly inspection of the lime injection system to ensure proper operation.
   iii. Continuously monitor the fabric filter inlet temperature.
   iv. Monitor the bag leak detector output voltage.

m. Weight measurement device calibrations.

n. Monthly inspection of equipment labels.

5. **Specific Recordkeeping Requirements:** The permittee shall retain records of the following:

a. Monthly and 12-month rolling total hours of operation.

b. Hourly aluminum production rate (based on monthly average).

c. 12-month rolling total aluminum produced.

d. Hourly pollutant emission rates (based on monthly average).

e. Production-based pollutant emission rates.

f. 12-month rolling total pollutant emissions.

g. Monthly fuel usage.

h. Monthly visible emissions using EPA Reference Method 9 (records kept for 2 years).

i. Records of any other parameters specified in **4. Specific Monitoring Requirements** above.

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

6. Specific Reporting Requirements:

a. The permittee shall report all visible emissions readings in excess of the 20% limit specified in this permit semi-annually to the Division's Bowling Green Regional office.

b. See **SECTION D 6.a.** below.

7. Specific Control Equipment Conditions:

a. The Swarf Furnace baghouse shall be properly maintained, kept in good operating condition, used in conjunction with the associated process (Swarf Furnace) and operated in accordance with the manufacturer's specifications.

b. The permittee shall maintain a daily log of the pressure drop across the baghouse and ensure it remains in the proper operating range as specified by the manufacturer or in the OM&M plan.

8. Alternate Operating Scenarios: NA

9. Compliance Schedule: NA

10. Compliance Certification Requirements: See **SECTION D 10.a.** below.

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Emission Unit: 55 (1111-1) Electric Induction Furnace

Description: In the Electric Induction Furnace, scalped chips and light gauge scrap are melted with no reactive fluxing. Emissions from the unit are controlled by a lime-injected baghouse shared with the Direct Chill Line Holding Furnaces. Under 40 CFR Part 63 Subpart RRR, the Electric Induction Furnace is classified as Group 2 Furnace.

Construction commenced:	Electric Induction Furnace	June 15, 1981
	Baghouse	January 9, 1991

APPLICABLE REGULATIONS:
401 KAR 59:010 New process operations
40 CFR Part 63 Subpart RRR Secondary Aluminum Production NESHAP

1. Operating Limitations:

a. The permittee shall operate the furnace within the range of charge materials, contaminant levels, and parameter values established in the Site-Specific Monitoring Plan (SSMP).

b. Only clean scrap with no reactive flux will be charged to the furnace.

c. Total aluminum charged shall not exceed 8,000 lbs/hr and 31,000 tons/yr.

Compliance Demonstration: Compliance with the limits described above shall be determined by comparing the allowable rate to the actual rate as calculated in **SECTION D 1.b.** below.

d. The permittee shall install and operate a device that measures and records the weight of all materials fed/charged and/or aluminum produced to an accuracy of ± 1%. The weight measurement device shall be calibrated according to manufacturer's specifications or at least once every 6 months.

e. The permittee shall develop diagrams and labels for each unit showing the information required by 40 CFR 63 Subpart RRR. The information will be stored in Logan Aluminum's database and retrievable at any computer in the plant. Each workstation shall have computer access.

2. Emission Limitations:

a. Visible emissions shall not equal or exceed 20% opacity [401 KAR 59:010, Section 3(1)(a)].

b. Particulate emissions shall not exceed 6.0 lbs/hr and 26.28 tons/yr.

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Compliance Demonstration: Compliance with the limits described above shall be determined by comparing the allowable rate to the actual rate as calculated in **SECTION D 2.c.** below.

c. See **SECTION B page 68** below.

d. See **SECTION D 2.g.** and **2.h.** below.

3. **Testing Requirements:** See **SECTION D 3.** below.

4. **Specific Monitoring Requirements:** The permitee shall monitor the following:

a. Monthly and 12-month rolling total hours of operation.

b. Hourly aluminum charging rate (based on monthly average).

c. 12-month rolling total aluminum charged.

d. Hourly pollutant emission rates (based on monthly average).

e. 12-month rolling total pollutant emissions.

f. Monthly visible emissions using EPA Reference Method 9.

g. Weight measurement device calibrations.

h. Monthly inspection of equipment labels.

5. **Specific Recordkeeping Requirements:** The permittee shall retain records of the following:

a. Monthly and 12-month rolling total hours of operation.

b. Hourly aluminum charging rate (based on monthly average).

c. 12-month rolling total aluminum charged.

d. Hourly pollutant emission rates (based on monthly average).

e. 12-month rolling total pollutant emissions.

f. Monthly visible emissions using EPA Reference Method 9 (records kept for 2 years).

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

g. Records of any other parameters specified in 4. **Specific Monitoring Requirements** above.

6. Specific Reporting Requirements:

a. The permittee shall report all visible emissions readings in excess of the 20% limit specified in this permit semi-annually to the Division's Bowling Green Regional office.

b. The permittee shall submit semi-annual certification to the Bowling Green Regional office that only clean charge and no reactive flux was used in the furnace.

c. See **SECTION D 6.a.** below.

7. Specific Control Equipment Conditions:

a. The baghouse shall be properly maintained, kept in good operating condition, used in conjunction with the associated processes (Electric Induction Furnace, DC Line Holding Furnaces) and operated in accordance with the manufacturer's specifications.

b. The permittee shall maintain a daily log of the pressure drop across the baghouse and ensure it remains in the proper operating range as specified by the manufacturer or in the OM&M plan.

8. Alternate Operating Scenarios: NA

9. Compliance Schedule: NA

10. Compliance Certification Requirements: See **SECTION D 10.a.** below.

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Emissions unit: 27 (1008-1) Reservoir Furnace

Description: The Reservoir Furnace serves as a supply unit to the Direct Chill Line Melting Furnaces. This unit receives molten aluminum from the Swarf Furnace as well as solid sows and pigs. Under 40 CFR Part 63 Subpart RRR, the Reservoir Furnace is classified as a Group 2 Furnace that processes only clean charge with no reactive fluxing.

Construction commenced: October 2, 1997

APPLICABLE REGULATIONS:
401 KAR 59:010 New process operations
40 CFR Part 63 Subpart RRR Secondary Aluminum Production NESHAP

1. Operating Limitations:

a. The permittee shall operate the furnace within the range of charge materials, contaminant levels, and parameter values established in the Site-Specific Monitoring Plan (SSMP).

b. Only clean materials with no reactive flux will be charged to the furnace.

c. Total aluminum production shall not exceed 60,000 lbs/hr and 262,800 tons/yr.

Compliance Demonstration: Compliance with the limits described above shall be determined by comparing the allowable rate to the actual rate as calculated in **SECTION D 1.b.** below.

d. Total natural gas usage rate shall not exceed 365.00 MMCF/yr.

Compliance Demonstration: Compliance with the limits described above shall be determined by comparing the allowable rate to the actual rate as calculated in **SECTION D 1.c.** below.

e. The permittee shall install and operate a device that measures and records the weight of all materials fed/charged and/or aluminum produced to an accuracy of ± 1%. The weight measurement device shall be calibrated according to manufacturer's specifications or at least once every 6 months.

f. The permittee shall develop diagrams and labels for each unit showing the information required by 40 CFR 63 Subpart RRR. The information will be stored in Logan Aluminum's database and retrievable at any computer in the plant. Each workstation shall have computer access.

g. See **SECTION D 1.d.** below.

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

2. Emission Limitations:

a. Visible emissions shall not equal or exceed 20% opacity [401 KAR 59:010, Section 3(1)(a)].

b. Particulate emissions shall not exceed 6.0 lbs/hr and 26.28 tons/yr.

Compliance Demonstration: Compliance with the limits described above shall be determined by comparing the allowable rate to the actual rate as calculated in **SECTION D 2.c.** below.

c. See **SECTION B page 68** below.

d. See **SECTION D 2.h.** below.

3. Testing Requirements: See **SECTION D 3.** below.

4. Specific Monitoring Requirements: The permitee shall monitor the following:

a. Monthly and 12-month rolling total hours of operation.

b. Hourly aluminum production rate (based on monthly average).

c. 12-month rolling total aluminum production.

d. Hourly pollutant emission rates (based on monthly average).

e. 12-month rolling total pollutant emissions.

f. Monthly fuel usage.

g. Monthly visible emissions using EPA Reference Method 9.

h. Monthly inspection of equipment labels.

5. Specific Recordkeeping Requirements: The permittee shall retain records of the following:

a. Monthly and 12-month rolling total hours of operation.

b. Hourly aluminum production rate (based on monthly average).

c. 12-month rolling total aluminum production.

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d. Hourly pollutant emission rates (based on monthly average).

e. 12-month rolling total pollutant emissions.

f. Monthly fuel usage.

g. Monthly visible emissions using EPA Reference Method 9 (records kept for 2 years).

h. Records of any other parameters specified in **4. Specific Monitoring Requirements** above.

6. Specific Reporting Requirements:

a. The permittee shall report all visible emissions readings in excess of the 20% limit specified in this permit semi-annually to the Division's Bowling Green Regional office.

b. The permittee shall submit semi-annual certification to the Bowling Green Regional office that only clean charge and no reactive flux was used in the furnace.

c. See **SECTION D 6.a.** below.

7. Specific Control Equipment Conditions: NA

8. Alternate Operating Scenarios: NA

9. Compliance Schedule: NA

10. Compliance Certification Requirements: See **SECTION D 10.a.** below.

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

GROUP REQUIREMENTS: Direct Chill Lines DC1-DC3 – Pre-Heaters & Melt Furnaces

Description: The permittee operates three Direct Chill Lines (DC1-DC3) each of which includes a Melt Furnace (with or without Pre-Heater), a Holding Furnace and a Flux Box (in-line fluxer). Under 40 CFR Part 63 Subpart RRR, the Melt Furnaces are classified as Group 2 Furnaces that process only clean charge with no reactive fluxing. Acceptable charge materials include aluminum pigs, sows, alloys and clean scrap. Molten aluminum from the Melting Furnaces flows into the Holding Furnaces where reactive fluxing occurs. The Pre-Heaters combust waste gas from the Melting Furnaces.

Unit ID#	Unit Name	Construction Commenced
02 (1005-1A&B)	DC1 Pre-Heater and Melt Furnace (East)	June 15, 1981
03 (1005-4A&B)	DC2 Pre-Heater and Melt Furnace (West)	June 15, 1981
40 (1006-2)	DC3 Melt Furnace	November 26, 1991

APPLICABLE REGULATIONS:
401 KAR 59:010 New process operations
40 CFR Part 63 Subpart RRR Secondary Aluminum Production NESHAP

1. Operating Limitations:

a. The permittee shall operate the furnace within the range of charge materials, contaminant levels, and parameter values established in the Site-Specific Monitoring Plan (SSMP).

b. Only clean materials with no reactive flux will be charged to the furnace.

c. Total aluminum charged shall not exceed the following limits:

Unit ID#	Unit Name	P'_{hri} (lbs/hr)	P'_{an} (tons/yr)
02 (1005-1A&B)	DC1 Melt Furnace (East)	60,000	250,530
03 (1005-4A&B)	DC2 Melt Furnace (West)	60,000	250,530
40 (1006-2)	DC3 Melt Furnace	88,333	368,834

Where i is the month, P'_{hri} is the allowable hourly charging rate averaged over month i (pounds/hour) and P'_{an} is the allowable 12-month rolling total charged (tons/year).

Compliance Demonstration: Compliance with the limits described above shall be determined by comparing the allowable rate to the actual rate as calculated in **SECTION D 1.b.** below.

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d. Total natural gas usage shall not exceed the following limits:

Unit ID#	Unit Name	NG'_{an} ($MMft^3/yr$)
02 (1005-1A&B)	DC1 Melt Furnace (East)	503.31
03 (1005-4A&B)	DC2 Melt Furnace (West)	503.31
40 (1006-2)	DC3 Melt Furnace	589.95

Where NG'_{an} is the allowable 12-month rolling total natural gas usage (million cubic feet/year).

Compliance Demonstration: Compliance with the limits described above shall be determined by comparing the allowable rate to the actual rate as calculated in **SECTION D 1.c.** below.

e. The permittee shall install and operate a device that measures and records the weight of all materials fed/charged and/or aluminum produced to an accuracy of ± 1%. The weight measurement device shall be calibrated according to manufacturer's specifications or at least once every 6 months.

f. The permittee shall develop diagrams and labels for each unit showing the information required by 40 CFR 63 Subpart RRR. The information will be stored in Logan Aluminum's database and retrievable at any computer in the plant. Each workstation shall have computer access.

g. See **SECTION D 1.d.** below.

2. Emission Limitations:

a. Visible emissions shall not equal or exceed 20% opacity [401 KAR 59:010, Section 3(1)(a)].

b. Particulate emissions shall not exceed the following limits:

Unit ID#	Unit Name	E'_{PMi} (lbs/hr)	E'_{PMan} (tons/yr)
02 (1005-1A&B)	DC1 Preheater and Melt Furnace (East)	6.0	25.053
03 (1005-4A&B)	DC2 Preheater and Melt Furnace (West)	6.0	25.053
40 (1006-2)	DC3 Melt Furnace	31.73	138.99

Where i is the month, E'_{PMi} is the allowable hourly particulate emission rate averaged over month i (pounds/hour) and E'_{PMan} is the allowable 12-month rolling total particulate emission rate (tons/year).

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Compliance Demonstration: Compliance with the limits described above shall be determined by comparing the allowable rate to the actual rate as calculated in **SECTION D 2.c.** below.

c. See **SECTION B page 68** below.

d. See **SECTION D 2.g.** and **2.h.** below.

3. **Testing Requirements:** See **SECTION D 3.** below.

4. **Specific Monitoring Requirements:** The permitee shall monitor the following:

a. Monthly and 12-month rolling total hours of operation.

b. Hourly aluminum charging rate (based on monthly average).

c. 12-month rolling total aluminum charged.

d. Hourly pollutant emission rates (based on monthly average).

e. 12-month rolling total pollutant emissions.

f. Monthly fuel usage.

g. Monthly visible emissions using EPA Reference Method 9.

h. Weight measurement device calibrations.

i. Monthly inspections of equipment labels.

5. **Specific Recordkeeping Requirements:** The permittee shall retain records of the following:

a. Monthly and 12-month rolling total hours of operation.

b. Hourly aluminum charging rate (based on monthly average).

c. 12-month rolling total aluminum charged.

d. Hourly pollutant emission rates (based on monthly average).

e. 12-month rolling total pollutant emissions.

f. Monthly fuel usage.

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g. Monthly visible emissions using EPA Reference Method 9 (records kept for 2 years).

h. Records of any other parameters specified in **4. Specific Monitoring Requirements** above.

6. Specific Reporting Requirements:

a. The permittee shall report all visible emissions readings in excess of the 20% limit specified in this permit semi-annually to the Division's Bowling Green Regional office.

b. The permittee shall submit semi-annual certification to the Bowling Green Regional office that only clean charge and no reactive flux was used in the furnace.

c. See **SECTION D 6.a.** below.

7. Specific Control Equipment Conditions: NA

8. Alternate Operating Scenarios: NA

9. Compliance Schedule: NA

10. Compliance Certification Requirements: See **SECTION D 10.a.** below.

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

GROUP REQUIREMENTS: Direct Chill Lines DC1-DC3 – Holding Furnaces

Description: The permittee operates three Direct Chill Lines (DC1-DC3) each of which includes a Melt Furnace (with or without Pre-Heater), a Holding Furnace and a Flux Box (in-line fluxer). Under 40 CFR Part 63 Subpart RRR, the Holding Furnaces are classified as Group 1 Furnaces with reactive fluxing. Magnesium and potassium chloride salts (60% and 40% by weight, respectively) are used as fluxing agents. Molten aluminum from the Melting Furnaces flows into the Holding Furnaces and from there into Flux Boxes where it is further treated with chlorine gas. Emissions from all three Holding Furnaces are controlled by a lime-injected baghouse that is also shared with the Electric Induction Furnace.

Unit ID#	Unit Name	Construction Commenced
04 (1005-2)	DC1 Hold Furnace (East)	June 15, 1981
17 (1005-5)	DC2 Hold Furnace (West)	June 15, 1981
42 (1006-2)	DC3 Hold Furnace	November 26, 1991

APPLICABLE REGULATIONS:
401 KAR 59:010 New process operations
40 CFR Part 63 Subpart RRR Secondary Aluminum Production NESHAP

1. Operating Limitations:

a. The permittee shall operate the furnace within the range of charge materials, contaminant levels, and parameter values established in the Site-Specific Monitoring Plan (SSMP).

b. Only clean materials will be charged to the furnace.

c. Total aluminum production shall not exceed the following limits:

Unit ID#	Unit Name	P'_{hri} (lbs/hr)	P'_{an} (tons/yr)
04 (1005-2)	DC1 Hold Furnace (East)	60,000	250,530
17 (1005-5)	DC2 Hold Furnace (West)	60,000	250,530
42 (1006-2)	DC3 Hold Furnace	88,333	368,834

Where i is the month, P'_{hri} is the allowable hourly production rate averaged over month i (pounds/hour) and P'_{an} is the allowable 12-month rolling total aluminum production (tons/year).

Compliance Demonstration: Compliance with the limits described above shall be determined by comparing the allowable rate to the actual rate as calculated in **SECTION D 1.b.** below.

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d. Total chlorine usage shall not exceed 0.49 lbs HCl/ton aluminum produced.

Compliance Demonstration: Compliance with the limits described above shall be determined each day by:

i. Calculating total chlorine added as salt flux and

ii. Comparing the allowable to the actual rate as calculated below:

$$F = \frac{F_{cy}}{P_{cy}}$$

Where F is the average fluxing rate per operating cycle (pounds HCl/ton aluminum produced), F_{cy} is the total HCl added per operating cycle (pounds/cycle) and P_{cy} is the total aluminum production (tons/cycle).

e. The permittee shall maintain a reactive flux injection rate at or below rate used during the performance test for each operating cycle or time period used in the performance test.

f. Total natural gas usage shall not exceed the following limits:

Unit ID#	Unit Name	NG'_{an} ($MMft^3/yr$)
04 (1005-2)	DC1 Hold Furnace (East)	51.84
17 (1005-5)	DC2 Hold Furnace (West)	51.84
42 (1006-2)	DC3 Hold Furnace	78.24

Where NG'_{an} is the allowable 12-month rolling total natural gas usage (million cubic feet/year).

Compliance Demonstration: Compliance with the limits described above shall be determined by comparing the allowable rate to the actual rate as calculated in **SECTION D 1.c.** below.

g. The permittee shall design and install an emission capture and collection system in accordance with "Industrial Ventilation: A Handbook of Recommended Practice" and operate the system in accordance with the Operation, Maintenance, and Monitoring plan (OM&M plan):

i. For continuous lime-injection systems, the permittee shall:

- Maintain free-flowing lime in the feed hopper or silo at all times;
- Maintain feeder setting at the level established during the performance test for continuous injection systems; and
- Maintain the alarm system (triboelectric flow indicator - notifies if the lime is not flowing) in good operating condition at all times.

ii. The permittee shall install and operate a bag leak detector system such that the alarm does not sound more than 5% of operating time in any 6-month period.

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iii. Should the bag leak detector sound and alarm, the permittee shall initiate corrective action within 1 hour and complete the corrective action procedures in accordance with the OM&M plan.

h. The permittee shall install and operate a device that measures and records the weight of all materials fed/charged and/or aluminum produced to an accuracy of ± 1%. The weight measurement device shall be calibrated according to manufacturer's specifications or at least once every 6 months.

i. The permittee shall develop diagrams and labels for each unit showing the information required by 40 CFR 63 Subpart RRR. The information will be stored in Logan Aluminum's database and retrievable at any computer in the plant. Each workstation shall have computer access.

j. See **SECTION D 1.d.** below.

2. Emission Limitations:

a. Visible emissions shall not equal or exceed 20% opacity [401 KAR 59:010, Section 3(1)(a)].

b. Particulate emissions shall not exceed the following limits:

Unit ID#	Unit Name	E'_{PMi} (lbs/hr)	E'_{PMan} (tons/yr)
04 (1005-2)	DC1 Hold Furnace (East)	6.0	25.053
17 (1005-5)	DC2 Hold Furnace (West)	6.0	25.053
42 (1006-2)	DC3 Hold Furnace	31.33	137.23

Where i is the month, E'_{PMi} is the allowable hourly particulate emission rate averaged over month i (pounds/hour) and E'_{PMan} is the allowable 12-month rolling total particulate emission rate (tons/year).

Compliance Demonstration: Compliance with the limits described above shall be determined by comparing the allowable rate to the actual rate as calculated in **SECTION D 2.c.** below.

c. Pursuant to 40 CFR 63 Subpart RRR, the source has a choice to limit emissions from Group 1 Furnaces on an individual basis or as part of a Secondary Aluminum Processing Unit (SAPU). As individual units, emissions from any Group 1 Furnace shall not exceed the following limitations:
   i. Particulate emissions shall not exceed 0.4 lbs/ton of feed.
   ii. Hydrochloric Acid (HCl) emissions shall not exceed 0.04 lbs/ton of feed.

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Compliance Demonstration: Compliance with the limits described above shall be determined by comparing the allowable rate to the actual rate as calculated below:

$$X = \frac{E_X}{P}$$

Where X is the production-based emission rate of each limited pollutant (pounds/ton aluminum fed), E_X is the actual hourly emission rate of pollutant X as determined during a performance test (pounds/hour) and P is the actual total aluminum production during the performance test (tons/hour).

If the source cannot or chooses not to demonstrate compliance with the individual limits in 2.c.i. and 2.c.ii. above, Logan Aluminum shall maintain a 3-day rolling average of the SAPU emission limits. See **SECTION D 2.f.** below.

d. See **SECTION B page 68** below.

e. See **SECTION D 2.g.** and **2.h.** below.

3. Testing Requirements:

a. Logan Aluminum shall conduct a performance test once per lifetime of this permit to measure particulate and HCl emissions at the outlet of the control device (baghouse). The results of the performance tests shall be used to establish emission rates (pounds/ton of feed/charge) to be used to demonstrate compliance with the limits described in **2.c.** above.

b. See **SECTION D 3.** below.

4. Specific Monitoring Requirements: The permitee shall monitor the following:

a. Monthly and 12-month rolling total hours of operation.

b. Hourly aluminum production rate (based on monthly average).

c. 12-month rolling total aluminum produced.

d. Hourly pollutant emission rates (based on monthly average).

e. Production-based pollutant emission rates.

f. 12-month rolling total pollutant emissions.

g. Monthly fuel usage.

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

h. Monthly visible emissions using EPA Reference Method 9.

i. Total reactive flux injection rate for each operating cycle or time period used in performance test or use the alternative flux injection rate determination procedure in 40 CFR Part 63 Subpart RRR section 63.1510(j)(5).

j. Time, weight and type of reactive flux added or injected daily while reactive fluxing occurs.

k. The permittee shall:
   i. Perform an annual inspection of all emission capture, collection, and transport systems to ensure that systems continue to operate in accordance with ACGIP standards.
   ii. Perform a monthly inspection of the lime injection system to ensure proper operation.
   iii. Continuously monitor the fabric filter inlet temperature.
   iv. Monitor the bag leak detector output voltage.

l. Weight measurement device calibrations.

m. Monthly inspection of equipment labels.

5. **Specific Recordkeeping Requirements:** The permittee shall retain records of the following:

a. Monthly and 12-month rolling total hours of operation.

b. Hourly aluminum production rate (based on monthly average).

c. 12-month rolling total aluminum produced.

d. Hourly pollutant emission rates (based on monthly average).

e. Production-based pollutant emission rates.

f. 12-month rolling total pollutant emissions.

g. Monthly fuel usage.

h. Monthly visible emissions using EPA Reference Method 9 (records kept for 2 years).

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i. Records of all other parameters specified in **4. Specific Monitoring Requirements** above.

6. Specific Reporting Requirements:

a. The permittee shall report all visible emissions readings in excess of the 20% limit specified in this permit semi-annually to the Division's Bowling Green Regional office.

b. The permittee shall submit semi-annual certification to the Bowling Green Regional office that only clean charge was used in the furnace.

c. See **SECTION D 6.a.** below.

7. Specific Control Equipment Conditions:

a. The baghouse shall be properly maintained, kept in good operating condition, used in conjunction with the associated processes (Holding Furnaces) and operated in accordance with the manufacturer's specifications.

b. The permittee shall maintain a daily log of the pressure drop across the baghouse and ensure it remains in the proper operating range as specified by the manufacturer or in the OM&M plan.

8. Alternate Operating Scenarios: NA

9. Compliance Schedule: NA

10. Compliance Certification Requirements: See **SECTION D 10.a.** below.

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

GROUP REQUIREMENTS: Direct Chill Lines DC1-DC3 – Flux Boxes

Description: The permittee operates three Direct Chill Lines (DC1-DC3) each of which includes a Melt Furnace, a Holding Furnace and a Flux Box (in-line fluxer). The three Flux Boxes process only clean charge from the Holding Furnaces and accommodate limited reactive fluxing with chlorine gas. Emissions from the Flux Boxes are controlled by a lime-injected baghouse shared by all three units.

Unit ID#	Unit Name	Construction Commenced
22 (1001-1)	DC1 Flux Box	June 15, 1981
22 (1001-1)	DC2 Flux Box	June 15, 1981
22 (1001-1)	DC3 Flux Box	November 26, 1991
22 (1001-1)	Baghouse	March 24, 2003

APPLICABLE REGULATIONS:
401 KAR 59:010 New process operations
40 CFR Part 63 Subpart RRR Secondary Aluminum Production NESHAP

1. Operating Limitations:

a. The permittee shall operate the units within the range of charge materials, contaminant levels, and parameter values established in the site-specific monitoring plan.

b. Only clean materials will be charged to the in-line fluxers.

c. Total combined aluminum production shall not exceed 332,500 lbs/hr and 900,000 tons/yr.

Compliance Demonstration: Compliance with the limits described above shall be determined by comparing the allowable rate to the actual rate as calculated in **SECTION D 1.b.** below.

d. Total chlorine usage shall not exceed 0.21 lbs/ton of aluminum processed.

Compliance Demonstration: Compliance with the fluxing chlorine usage rate shall be determined each day by:
i. Calculating total chlorine added and
ii. Comparing the allowable to the actual rate as calculated below:

$$F = \frac{F_{cy}}{P_{cy}}$$

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Where F is the average fluxing rate per operating cycle (pounds HCl/ton aluminum processed), F_{cy} is the total HCl added per operating cycle (pounds/cycle) and P_{cy} is the total aluminum processed (tons/cycle).

e. The permittee shall maintain a reactive flux injection rate at or below rate used during the performance test for each operating cycle or time period used in the performance test.

f. The permittee shall design and install an emission capture and collection system in accordance with "Industrial Ventilation: A Handbook of Recommended Practice" and operate the system in accordance with the Operation, Maintenance, and Monitoring plan (OM&M plan):

i. For continuous lime-injection systems, the permittee shall:
- Maintain free-flowing lime in the feed hopper or silo at all times;
- Maintain feeder setting at the level established during the performance test for continuous injection systems; and
- Maintain the alarm system (triboelectric flow indicator - notifies if the lime is not flowing) in good operating condition at all times.

ii. The permittee shall install and operate a bag leak detector system such that the alarm does not sound more than 5% of operating time in any 6-month period.

iii. Should the bag leak detector sound and alarm, the permittee shall initiate corrective action within 1 hour and complete the corrective action procedures in accordance with the OM&M plan.

g. The permittee shall install and operate a device that measures and records the weight of all materials fed/charged and/or aluminum produced to an accuracy of ± 1%. The weight measurement device shall be calibrated according to manufacturer's specifications or at least once every 6 months.

h. The permittee shall develop diagrams and labels for each unit showing the information required by 40 CFR 63 Subpart RRR. The information will be stored in Logan Aluminum's database and retrievable at any computer in the plant. Each workstation shall have computer access.

2. Emission Limitations:

a. Visible emissions shall not equal or exceed 20% opacity [401 KAR 59:010, Section 3(1)(a)].

b. Combined particulate emissions shall not exceed 6.0 lbs/hr and 26.28 tons/yr.

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Compliance Demonstration: Compliance with the limits described above shall be determined by comparing the allowable rate to the actual rate as calculated in **SECTION D 2.c.** below.

c. Pursuant to 40 CFR 63 Subpart RRR, the source has a choice to limit emission from Group 1 furnaces on an individual basis or as part of a Secondary Aluminum Processing Unit (SAPU). As individual units, emissions from any Flux Box (inline fluxer) shall not exceed the following limitations:

i. Particulate emissions from each flux box shall not exceed 0.01 lbs/ton of feed.

ii. Hydrochloric acid (HCl) emissions from each flux box shall not exceed 0.04 lbs/ton of feed.

Compliance Demonstration: Compliance with the limits described above shall be determined by comparing the allowable rate to the actual rate as calculated below:

$$X = \frac{E_X}{P}$$

Where X is the production-based emission rate of each limited pollutant (pounds/ton aluminum charged), E_X is the actual hourly emission rate of pollutant X as determined during a performance test (pounds/hour) and P is the actual total aluminum charged during the performance test (tons/hour).

If the source cannot or chooses not to demonstrate compliance with the individual limits in 2.c.i. and 2.c.ii. above, Logan Aluminum shall maintain a 3-day rolling average of the SAPU emission limits. See **SECTION D 2.f.** below.

d. See **SECTION B page 68** below.

e. See **SECTION D 2.g.** and **2.h.** below.

3. Testing Requirements:

a. Logan Aluminum shall conduct a performance test once per lifetime of this permit to measure particulate and HCl emissions at the outlet of the control device (baghouse). The results of the performance tests shall be used to establish emission rates (pounds/ton of feed/charge) to be used to demonstrate compliance with the limits described in 2.c. above.

b. See **SECTION D 3.** below.

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4. **Specific Monitoring Requirements:** The permittee shall monitor the following:

a. Monthly and 12-month rolling total hours of operation.

b. Hourly aluminum production rate (based on monthly average).

c. 12-month rolling total aluminum produced.

d. Hourly pollutant emission rates (based on monthly average).

e. Production-based pollutant emission rates.

f. 12-month rolling total pollutant emissions.

g. Monthly visible emissions using EPA Reference Method 9.

h. For each operating cycle or time period used in the performance test, the following parameters:
   i. Total fluxing hours per operating cycle.
   ii. Total HCl added by weight per operating cycle.
   iii. Hourly fluxing rate (based on operating cycle average).
   iv. Other parameters needed to perform alternative flux injection rate determination as described in 40 CFR Part 63 Subpart RRR section 63.1510(j)(5).

i. The permittee shall:
   i. Perform an annual inspection of all emission capture, collection, and transport systems to ensure that systems continue to operate in accordance with ACGIP standards.
   ii. Perform a monthly inspection of the lime injection system to ensure proper operation.
   iii. Monitor the bag leak detector output voltage.

j. Weight measurement device calibrations.

k. Monthly inspections of equipment labels.

5. **Specific Recordkeeping Requirements:** The permittee shall retain records of the following:

a. Monthly and 12-month rolling total hours of operation.

b. Hourly aluminum production rate (based on monthly average).

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c. 12-month rolling total aluminum produced.

d. Hourly pollutant emission rates (based on monthly average).

e. Production-based pollutant emission rates.

f. 12-month rolling total pollutant emissions.

g. Monthly visible emissions using EPA Reference Method 9 (records kept for 2 years).

h. Records of all other parameters specified in **4. Specific Monitoring Requirements** above.

6. Specific Reporting Requirements:

a. The permittee shall report all visible emissions readings in excess of the 20% limit specified in this permit semi-annually to the Division's Bowling Green Regional office.

b. The permittee shall submit semi-annual certification to the Bowling Green Regional office that only clean charge was used in the furnace.

c. See **SECTION D 6.a.** below.

7. Specific Control Equipment Conditions:

a. The Flux Box baghouse shall be properly maintained, kept in good operating condition, used in conjunction with the associated process (Flux Boxes) and and operated in accordance with the manufacturer's specifications.

b. The permittee shall maintain a daily log of the pressure drop across the baghouse and ensure it remains in the proper operating range as specified by the manufacturer or in the OM&M plan.

8. Alternate Operating Scenarios: NA

9. Compliance Schedule: NA

10. Compliance Certification Requirements: See **SECTION D 10.a.** below.

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Emission Unit: 01 (1002-1) Aluminum Skimming House

Description: The Aluminum Skimming House receives aluminum skimmings from the direct cast process and is equipped with a baghouse.

Construction commenced: June 15, 1981

APPLICABLE REGULATIONS:
401 KAR 59:010 New process operations

1. **Operating Limitations:** Total material processed shall not exceed 5,708 lbs/hr and 25,000 tons/yr:

   Compliance Demonstration: Compliance with the limits described above shall be determined by comparing the allowable rate to the actual rate as calculated in **SECTION D 1.b.** below.

2. **Emission Limitations:**

   a. Visible emissions shall not equal or exceed 20% opacity [401 KAR 59:010, Section 3(1)(a)].

   b. Particulate emissions shall not exceed 6.0 lbs/hr and 26.28 tons/yr.

      Compliance Demonstration: Compliance with the limits described above shall be determined by comparing the allowable rate to the actual rate as calculated in **SECTION D 2.c.** below.

   c. See **SECTION B page 68** below.

   d. See **SECTION D 2.g.** and **2.h.** below.

3. **Testing Requirements:** See **SECTION D 3.** below.

4. **Specific Monitoring Requirements:** The permittee shall monitor the following:

   a. Monthly and 12-month rolling total hours of operation.

   b. Hourly processing rate (based on monthly average).

   c. 12-month rolling total material processed.

   d. Hourly pollutant emission rates (based on monthly average).

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e. 12-month rolling total pollutant emissions.

f. Weekly visible emissions using EPA Reference Method 9.

5. **Specific Recordkeeping Requirements:** The permittee shall retain records of the following:

a. Monthly and 12-month rolling total hours of operation.

b. Hourly processing rate (based on monthly average).

c. 12-month rolling total material processed.

d. Hourly pollutant emission rates (based on monthly average).

e. 12-month rolling total pollutant emissions.

f. Weekly visible emissions using EPA Reference Method 9 (records kept for 2 years).

6. **Specific Reporting Requirements:**

a. The permittee shall report all visible emissions readings in excess of the 20% limit specified in this permit semi-annually to the Division's Bowling Green Regional office.

b. See **SECTION D 6.a.** below.

7. **Specific Control Equipment Conditions:**

a. The Skimming House baghouse shall be properly maintained, kept in good operating condition, used in conjunction with the associated process (Skimming House) and and operated in accordance with the manufacturer's specifications.

b. The permittee shall maintain a daily log of the pressure drop across the baghouse, and ensure it remains in the proper operating range as specified by the manufacturer or in the OM&M plan.

8. **Alternate Operating Scenarios:** NA

9. **Compliance Schedule:** NA

10. **Compliance Certification Requirements:** See **SECTION D 10.a.** below.

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GROUP REQUIREMENTS: Carbottom &Pusher Furnaces

Description: The Carbottom and Pusher Furnaces are used to heat the aluminum before the Hot Rolling Mill.

Unit ID#	Unit Name	Construction Commenced
06 (2010-A&B)	Carbottom Furnaces 1 - 7	June 15, 1981
18 (2011-A)	Pusher Furnaces 1 and 2	January 16, 1990
19 (2011-B)	Pusher Furnace 3	October, 1999

APPLICABLE REGULATIONS:
401 KAR 59:010 New process operations

1. Operating Limitations:

a. Total aluminum processed shall not exceed the following limitations:

Unit ID#	Unit Name	P'_{hri} (lbs/hr)	P'_{an} (tons/yr)
06 (2010-A&B)	Carbottom Furnaces 1 - 7	274,400	1,201,872
18 (2011-A)	Pusher Furnaces 1 and 2	182,650	800,007
19 (2011-B)	Pusher Furnace 3	none	none

Where i is the month, P'_{hri} is the allowable hourly processing rate averaged over month i (pounds/hour) and P'_{an} is the allowable 12-month rolling total aluminum processed (tons/year).

Compliance Demonstration: Compliance with the limits described above shall be determined by comparing the allowable rate to the actual rate as calculated in **SECTION D 1.b.** below.

b. Total natural gas usage shall not exceed the following limitations:

Unit ID#	Unit Name	NG'_{an} ($MMft^3/yr$)
06 (2010-A&B)	Carbottom Furnaces 1 - 7	512.29
18 (2011-A)	Pusher Furnaces 1 and 2	590.00
19 (2011-B)	Pusher Furnace 3	420.00

Where NG'_{an} is the allowable 12-month rolling total natural gas usage (million cubic feet/year).

Compliance Demonstration: Compliance with the limits described above shall be determined by comparing the allowable rate to the actual rate as calculated in **SECTION D 1.c.** below.

c. See **SECTION D 1.d.** below.

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2. Emission Limitations:

a. Visible emissions shall not equal or exceed 20% opacity [401 KAR 59:010, Section 3(1)(a)].

b. Particulate emissions shall not exceed the following limits:

Unit ID#	Unit Name	E'_{PMi} (lbs/hr)	E'_{PMan} (tons/yr)
06 (2010-A&B)	Carbottom Furnaces 1 - 7	none	none
18 (2011-A)	Pusher Furnaces 1 and 2	6.0	26.28
19 (2011-B)	Pusher Furnace 3	3.0	13.14

Where i is the month, E'_{PMi} is the allowable average hourly particulate emission rate averaged over month i (pounds/hour) and E'_{PMan} is the allowable 12-month rolling total particulate emission rate (tons/year).

Compliance Demonstration: Compliance with the limits described above shall be determined by comparing the allowable rate to the actual rate as calculated in **SECTION D 2.c.** below.

c. See **SECTION D 2.g.** and **2.h.** below.

3. Testing Requirements: See **SECTION D 3.** below.

4. Specific Monitoring Requirements: The permittee shall monitor the following:

a. Monthly and 12-month rolling total hours of operation.

b. Hourly aluminum processing rate (based on monthly average).

c. 12-month rolling total aluminum processed.

d. Hourly pollutant emission rates (based on monthly average).

e. 12-month rolling total pollutant emissions.

f. Monthly fuel usage.

g. Monthly visible emissions using EPA Reference Method 9.

5. Specific Recordkeeping Requirements: The permittee shall retain records of the following:

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a. Monthly and 12-month rolling total hours of operation.

b. Hourly aluminum processing rate (based on monthly average).

c. 12-month rolling total aluminum processed.

d. Hourly pollutant emission rates (based on monthly average).

e. 12-month rolling total pollutant emissions.

f. Monthly fuel usage.

g. Monthly visible emissions using EPA Reference Method 9 (records kept for 2 years).

6. Specific Reporting Requirements:

a. The permittee shall report all visible emissions readings in excess of the 20% limit specified in this permit semi-annually to the Division's Bowling Green Regional office.

b. See **SECTION D 6.a.** below.

7. Specific Control Equipment Conditions: NA

8. Alternate Operating Scenarios: NA

9. Compliance Schedule: NA

10. Compliance Certification Requirements: See **SECTION D 10.a.** below.

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GROUP REQUIREMENTS: Reversing & Finishing Mill

Description: The Reversing and Finishing Mills are used to roll aluminum ingots to a specific thickness. Both are equipped with dedicated inertial separators to control PM and VOC emissions.

Unit ID#	Unit Name	Construction Commenced
07 (2015-1)	Reversing Mill	June 15, 1981
08 (2015-2)	Finishing Mill	June 15, 1981

APPLICABLE REGULATIONS:
401 KAR 59:010 New process operations

1. Operating Limitations:

a. Total aluminum processed shall not exceed the following limitations:

Unit ID#	Unit Name	P'_{hri} (lbs/hr)	P'_{an} (tons/yr)
07 (2015-1)	Reversing Mill	400,000	1,481,250
08 (2015-2)	Finishing Mill	350,000	1,382,500

Where i is the month, P'_{hri} is the allowable hourly processing rate averaged over month i (pounds/hour) and P'_{an} is the allowable 12-month rolling total aluminum processed (tons/year).

Compliance Demonstration: Compliance with the limits described above shall be determined by comparing the allowable rate to the actual rate as calculated in **SECTION D 1.b.** below.

b. Total severely hydrotreated mineral oil usage rates shall not exceed the following limitations:

Unit ID#	Unit Name	P'_{hri} (gal/mo)	P'_{an} (gal/yr)
07 (2015-1)	Reversing Mill	11,556	138,672
08 (2015-2)	Finishing Mill	38,573	462,876

Where i is the month, P'_{hri} is the allowable hourly usage rate averaged over month i (gallons/month) and P'_{an} is the allowable 12-month rolling total usage (gallons/year).

Compliance Demonstration: Compliance with the limits described above shall be determined by comparing the allowable rate to the actual rate as calculated in **SECTION D 1.b.** below with the following exceptions:

i. Records of severely hydrotreated mineral oil disposed of, transferred offsite, and returned to supplier can be subtracted from the total usage.

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ii. Logan aluminum shall be allowed three months from the issuance date of this permit to install the metering system necessary to show compliance.

2. Emission Limitations:

a. Visible emissions shall not equal or exceed 20% opacity [401 KAR 59:010, Section 3(1)(a)].

b. Particulate emissions shall not exceed the following limits:

Unit ID#	Unit Name	E'_{PMi} (lbs/hr)	E'_{PMan} (tons/yr)
07 (2015-1)	Reversing Mill	2.34	none
08 (2015-2)	Finishing Mill	15.0	59.25

Where i is the month, E'_{PMi} is the allowable average hourly particulate emission rate averaged over month i (pounds/hour) and E'_{PMan} is the allowable 12-month rolling total particulate emission rate (tons/year)

Compliance Demonstration: Compliance with the limits described above shall be determined by comparing the allowable rate to the actual rate as calculated in **SECTION D 2.c.** below.

d. See **SECTION B page 68** below.

e. To preclude PSD applicability:
i. Criteria pollutants emitted during the first 4066 hours of operation in any consecutive 12-month period shall be counted toward the original plant-wide emission limits as described in **SECTION D 2.g.** below.
ii. Criteria pollutants emitted after the first 4066 hours of operation in any consecutive 12-month period shall be counted toward the second plant-wide emission limits as described in **SECTION D 2.h.** below.

3. Testing Requirements: See **SECTION D 3.** and **SECTION G 4.** below.

4. Specific Monitoring Requirements: The permittee shall monitor the following:

a. Monthly and 12-month rolling total hours of operation.

b. Hourly hydrotreated mineral oil usage rate (based on monthly average).

c. 12-month rolling total hydrotreated mineral oil usage rate.

d. Hourly pollutant emission rates (based on monthly average).

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e. 12-month rolling total pollutant emissions.

f. Monthly visible emissions using EPA Reference Method 9.

5. **Specific Recordkeeping Requirements:** The permittee shall retain records of the following:

a. Monthly and 12-month rolling total hours of operation.

b. Hourly hydrotreated mineral oil usage rate (based on monthly average).

c. 12-month rolling total hydrotreated mineral oil usage rate.

d. Hourly pollutant emission rates (based on monthly average).

e. 12-month rolling total pollutant emissions.

f. Monthly visible emissions using EPA Reference Method 9 (records kept for 2 years).

6. **Specific Reporting Requirements:**

a. The permittee shall report all visible emissions readings in excess of the 20% limit specified in this permit semi-annually to the Division's Bowling Green Regional office.

b. See **SECTION D 6.a.** below.

7. **Specific Control Equipment Conditions:**

a. The Reversing and Finishing Mill Inertial Separators shall be properly maintained, kept in good operating condition, used in conjunction with the associated processes (Reversing and Finishing Mills) and and operated in accordance with the manufacturer's specifications.

b. The permittee shall maintain a daily log of the pressure drop across the inertial separator and ensure it remains within the proper operating range.

8. **Alternate Operating Scenarios:** NA

9. **Compliance Schedule:** NA

10. **Compliance Certification Requirements:** See **SECTION D 10.a.** below.

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GROUP REQUIREMENTS: Cold Mills

Description: The Cold Mills receive material from the Finishing Mill and roll it into coiled aluminum. The Cold Mills are equipped with various devices to control particulate and VOC emissions.

Unit ID#	Unit Name	Construction Commenced
10 (3005-1)	Cold Mill 1 & Activated Carbon Unit	June 15, 1981
10 (3005-1)	Cold Mill 1 Deep Bed Filter	December 1, 1996
14 (3010-1)	Cold Mill 2 & Activated Carbon Unit	June 15, 1981
14 (3010-1)	Cold Mill 2 Progressive Purification	April 5, 1992
21 (3040-1A)	Cold Mill 3 & Progressive Purification	January 7, 1991
21 (3040-1A)	Cold Mill 3 condenser	1997

APPLICABLE REGULATIONS:
401 KAR 59:010 New process operations

1. Operating Limitations:

a. Total aluminum processed shall not exceed the following limitations:

Unit ID#	Unit Name	P'_{hri} (lbs/hr)	P'_{an} (tons/yr)
10 (3005-1)	Cold Mill 1	366,667	1,510,484
14 (3010-1)	Cold Mill 2	134,233	566,127
21 (3040-1A)	Cold Mill 3	192,000	758,400

Where i is the month, P'_{hri} is the allowable hourly processing rate averaged over month i (pounds/hour) and P'_{an} is the allowable 12-month rolling total aluminum processed (tons/year).

Compliance Demonstration: Compliance with the limits described above shall be determined by comparing the allowable rate to the actual rate as calculated in **SECTION D 1.b.** below.

b. Total severely hydrotreated mineral oil usage rates shall not exceed the following limitations:

Unit ID#	Unit Name	P'_{hri} (gal/mo)	P'_{an} (gal/yr)
10 (3005-1)	Cold Mill 1	25,120	301,440
14 (3010-1)	Cold Mill 2	17,695	212,340
21 (3040-1A)	Cold Mill 3	48,080	576,960

Where i is the month, P'_{hri} is the allowable hourly usage rate averaged over month i (gallons/month) and P'_{an} is the allowable 12-month rolling total oil used charged (gallons/year).

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Compliance Demonstration: Compliance with the limits described above shall be determined by comparing the allowable rate to the actual rate as calculated in **SECTION D 1.b.** below with the following exceptions:

i. Records of severely hydrotreated mineral oil disposed of, transferred offsite, and returned to supplier can be subtracted from the total usage.

ii. Logan aluminum shall be allowed three months from the issuance date of this permit to install the metering system necessary to show compliance.

2. Emission Limitations:

a. Visible emissions shall not equal or exceed 20% opacity [401 KAR 59:010, Section 3(1)(a)].

b. Particulate emissions shall not exceed the following limits:

Unit ID#	Unit Name	E'_{PMi} (lbs/hr)	E'_{PMan} (tons/yr)
10 (3005-1)	Cold Mill 1	39.84	164.12
14 (3010-1)	Cold Mill 2	33.93	140.57
21 (3040-1A)	Cold Mill 3	25.0	93.75

Where i is the month, E'_{PMi} is the allowable average hourly particulate emission rate averaged over month i (pounds/hour) and E'_{PMan} is the allowable 12-month rolling total particulate emission rate (tons/year)

Compliance Demonstration: Compliance with the limits described above shall be determined by comparing the allowable rate to the actual rate as calculated in **SECTION D 2.c.** below.

c. See **SECTION B page 68** below.

d. See **SECTION D 2.h.** below.

3. Testing Requirements: See **SECTION D 3.** below.

4. Specific Monitoring Requirements: The permittee shall monitor the following:

a. Monthly and 12-month rolling total hours of operation.

b. Hourly hydrotreated mineral oil usage rate (based on monthly average).

c. 12-month rolling hydrotreated mineral oil usage.

d. Hourly pollutant emission rates (based on monthly average).

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e. 12-month rolling total pollutant emissions.

f. Monthly visible emissions using EPA Reference Method 9.

5. Specific Recordkeeping Requirements: The permittee shall retain records of the following:

a. Monthly and 12-month rolling total hours of operation.

b. Hourly hydrotreated mineral oil usage rate (based on monthly average).

c. 12-month rolling total hydrotreated mineral oil usage.

d. Hourly pollutant emission rates (based on monthly average).

e. 12-month rolling total pollutant emissions.

f. Monthly visible emissions using EPA Reference Method 9 (records kept for 2 years).

6. Specific Reporting Requirements:

a. The permittee shall report all visible emissions readings in excess of the 20% limit specified in this permit semi-annually to the Division's Bowling Green Regional office.

b. See **SECTION D 6.a.** below.

7. Specific Control Equipment Conditions:

a. The permittee shall properly maintain, keep in good operating condition, use in conjunction with the associated processes and in accordance with the manufacturer's specifications all control equipment used in conjunction with Cold Mills 1-3.

b. The permittee shall maintain a daily log of the pressure drop across the control equipment and ensure it remains within the proper operating range.

c. If the severely hydrotreated rolling oil used at the facility is de-listed as a VOC during the term of this permit:
   i. The permittee shall continue to operate all Progressive Purification Systems.

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ii. The permittee shall have the option of running the other control equipment.

8. Alternate Operating Scenarios: NA

9. Compliance Schedule: NA

10. Compliance Certification Requirements: See **SECTION D 10.a.** below.

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Emission Unit: 12 (3030-A,B,C,D) Annealing Furnaces 1, 2, 3, 4, and 5

Description: The Annealing Furnaces treat coiled aluminum.

Construction commenced: June 15, 1981

APPLICABLE REGULATIONS:
401 KAR 59:010 New process operations

1. Operating Limitations:

a. Total aluminum processed shall not exceed 137,000 lbs/hr and 600,060 tons/yr:

Compliance Demonstration: Compliance with the limits described above shall be determined by comparing the allowable rate to the actual rate as calculated in **SECTION D 1.b.** below.

b. Total natural gas usage shall not exceed 239.76 MMCF/yr.

Compliance Demonstration: Compliance with the limits described above shall be determined by comparing the allowable rate to the actual rate as calculated in **SECTION D 1.c.** below.

c. See **SECTION D 1.d.** below.

2. Emission Limitations:

a. Visible emissions shall not equal or exceed 20% opacity [401 KAR 59:010, Section 3(1)(a)].

b. See **SECTION D 2.g.** below.

3. Testing Requirements: See **SECTION D 3.** below.

4. Specific Monitoring Requirements: The permittee shall monitor the following:

a. Monthly and 12-month rolling total hours of operation.

b. Hourly aluminum processing rate (based on monthly average).

c. 12-month rolling total aluminum processed.

d. Hourly pollutant emission rates (based on monthly average).

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e. 12-month rolling total pollutant emissions.

f. Monthly fuel usage.

g. Monthly visible emissions using EPA Reference Method 9.

5. **Specific Recordkeeping Requirements:** The permittee shall retain records of the following:

a. Monthly and 12-month rolling total hours of operation.

b. Hourly aluminum processing rate (based on monthly average).

c. 12-month rolling total aluminum processed.

d. Hourly pollutant emission rates (based on monthly average).

e. 12-month rolling total pollutant emissions.

f. Monthly fuel usage.

g. Monthly visible emissions using EPA Reference Method 9 (records kept for 2 years).

6. **Specific Reporting Requirements:**

a. The permittee shall report all visible emissions readings in excess of the 20% limit specified in this permit semi-annually to the Division's Bowling Green Regional office.

b. See **SECTION D 6.a.** below

7. **Specific Control Equipment Conditions:** NA

8. **Alternate Operating Scenarios:** NA

9. **Compliance Schedule:** NA

10. **Compliance Certification Requirements:** See **SECTION D 10.a.** below.

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Emissions Unit: 53 (4022-5) Parts Washer – Cold Mill 3 Area

Description: At this parts washer, coiled aluminum/cast aluminum parts get dipped in a cleaning tank.

Construction commenced: September 24, 1992

APPLICABLE REGULATIONS:
401 KAR 59:185 New solvent metal cleaning equipment

1. **Operating Limitations:**

   a. Waste solvent shall not be disposed of or transferred to another party such that greater than twenty (20) percent by weight of the waste solvent can evaporate into the atmosphere.

   b. Waste solvent shall only be stored in covered containers.

   c. The degreaser cover shall be closed at all times unless parts are being handled in the cleaner.

   d. Cleaned parts shall be drained until dripping ceases (fifteen (15) seconds is usually necessary).

2. **Emission Limitations:** NA

3. **Testing Requirements:** NA

4. **Specific Monitoring Requirements:** NA

5. **Specific Recordkeeping Requirements:** NA

6. **Specific Reporting Requirements:** NA

7. **Specific Control Equipment Conditions:**

   a. The cleaner shall be equipped with a cover. If the solvent volatility is greater than fifteen (15) mm Hg measured at 100^{o}F or if the solvent is agitated or heated, then the cover shall be designed so that it can be easily operated with one (1) hand.

   b. The cleaner shall be equipped with a drainage facility so that solvent that drains off parts removed from the cleaner will return to the cleaner. If the solvent volatility is greater than thirty-two (32) mm Hg measured at 100° F then the drainage facility shall be internal so that parts are enclosed under the cover while

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draining. The drainage facility may be external if the cabinet determines that an internal type cannot fit into the cleaning system.

c. A permanent, conspicuous label, summarizing the operating limitations of this emission unit, shall be installed on or near the cleaner.

d. If used, the solvent spray shall be a fluid stream (not a fine, atomized or shower type spray) and at a pressure which does not cause excessive splashing.

e. If the solvent volatility is greater than thirty-two (32) mm Hg measured at 100^{o}F or if the solvent is heated above 120^{o}F, then one (1) of the following control devices shall be used:
   i. A freeboard with a ratio greater than or equal to 0.7.
   ii. A water cover (solvent shall be insoluble in and heavier than water).
   iii. Other systems of equivalent control such as a refrigerated chiller or carbon adsorption unit.

8. Alternate Operating Scenarios: NA

9. Compliance Schedule: NA

10. Compliance Certification Requirements: See **SECTION D 10.a.** below.

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Emissions Unit: 09 (6020-A) Coating Line 1

Description: In this process, coiled aluminum coil is pre-treated, coated with various water- or solvent-based paints and dried in a bake-off oven. A natural gas incinerator controls particulate and VOC emissions from the operation.

Construction commenced: June 15, 1981

APPLICABLE REGULATIONS:
40 CFR 60 Subpart TT Standards of performance for metal coil surface coating
40 CFR 63 Subpart SSSS National Emission Standards for Hazardous Air Pollutants: Surface Coating of Metal Coil.
401 KAR 59:010 New process operations

1. Operating Limitations:

a. Total aluminum processed shall not exceed 23,750 lbs/hr and 95,000 tons/yr.

Compliance Demonstration: Compliance with the limits described above shall be determined by comparing the allowable rate to the actual rate as calculated in **SECTION D 1.b.** below.

b. Total annual coating usage (as applied) shall not exceed 2,125,000 gals/yr.

Compliance Demonstration: Compliance with the limits described above shall be determined by comparing the allowable rate to the actual rate as calculated below:

$$C = \sum_{i=1}^{12} C_i$$

Where i is the month, C is the actual 12-month rolling total coating usage (gal/year) and C_i is the actual monthly coating usage for month i (gal/month).

c. Total annual methyl ethyl ketone (MEK) cleanup solvent usage shall not exceed 46,000 gals/yr.

Compliance Demonstration: Compliance with the limits described above shall be determined by comparing the allowable rate to the actual rate as calculated below:

$$S = \sum_{i=1}^{12} S_i$$

Where i is the month, S is the actual 12-month rolling total coating usage (gal/year) and S_i is the actual monthly coating usage for month i (gal/month).

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d. The mix room doors must remain shut at all times to prevent MEK from escaping into ambient air.

e. Pursuant to 40 CFR 63, Subpart SSSS:
   i. The average combustion temperature of the incinerator in any 3-hour period must not fall below the combustion temperature limit established according to §63.5160(d)(3)(i):
      - 1308ºF (708ºC) when solvent-based coatings are used.
      - 1166ºF (630ºC) when water-based coatings are used.
   ii. Continuous compliance with combustion temperature requirements shall be demonstrated by collecting data according to §63.5150(a)(3), reducing the data to 3-hour block averages, and maintaining the 3-hour average combustion temperature at or above the temperature limit.
   iii. The permittee shall develop a monitoring plan for the emission capture system that identifies operating parameters to be monitored and specifies operating limits according to §63.5150(a)(4). Continuous compliance shall be demonstrated by conducting monitoring according to the plan §63.5150(a)(4).

f. Total natural gas usage rate shall not exceed 219 MMCF/yr.

Compliance Demonstration: Compliance with the limits described above shall be determined by comparing the allowable rate to the actual rate as calculated in **SECTION D 1.c.** below.

g. See **SECTION D 1.d.** below.

2. Emission Limitations:

a. Visible emissions shall not equal or exceed 20% opacity [401 KAR 59:010, Section 3(1)(a)].

b. Particulate emissions shall not exceed 3.99 lbs/hr.

Compliance Demonstration: Compliance with the limits described above shall be determined by comparing the allowable rate to the actual rate as calculated below:

$$E_{PM_i} = \sum_{j=1}^{n} \frac{P_{ij} \cdot S_j}{h_i} \cdot \left(1 - \frac{TE}{100}\right)$$

Where i is the month, j is the individual coating, n is the total number of coatings, E_{PMi} is the actual average hourly particulate emission rate for month i (pounds/hour), P_{ij} is the actual monthly coating usage (gallons/month), S_j is the solid content of coating j (pounds/gallon), TE is the applicator transfer efficiency

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(ratio of actual coating solids deposited to the total amount of coating solids applied), and h_i is the actual total hours of operation for month i (hours/month).

c. To preclude PSD applicability, particulate emitted after application of 1,870,000 gallons of coating in any consecutive 12-month period shall not exceed 15 tons/yr.

Compliance Demonstration: Compliance with the limits described above shall be determined by comparing the allowable rate to the actual rate as calculated in below:

$$E_{PM} = \sum_{i=1}^{12}\sum_{j=1}^{n} \frac{P_{ij} \cdot S_j}{2000} \cdot \left(1 - \frac{TE}{100}\right)$$

Where i is the month, j is the individual coating, n is the total number of coatings, E_{PM} actual 12-month rolling total particulate emissions (tons/year), P_{ij} is the actual monthly coating usage (gallons/month), S_j is the solid content of coating j (pounds/gallon) and TE is the applicator transfer efficiency (ratio of actual coating solids deposited to the total amount of coating solids applied). ***NOTE: This limit applies only after the total coating (as applied) usage during any consecutive 12-month period exceeds 1,870,000 gallons.***

d. VOC emissions shall be controlled to less than 10% of the VOCs applied each month [40 CFR 60.462(a)(3)].

Compliance Demonstration: The permittee shall be deemed in compliance if the permittee demonstrates compliance with the limits in 2.f. below.

e. To preclude PSD applicability, VOC emitted after application of 1,870,000 gallons of coating and 34,419 gallons of MEK in any consecutive 12-month period shall not exceed 40 tons/yr.

Compliance Demonstration: Compliance with the operating limits described above shall be determined by comparing the allowable rate to the actual rate as calculated in below:

$$E_{VOC} = \sum_{i=1}^{12} \frac{a_i + b_i}{2000} \cdot \left(1 - \frac{CE}{100}\right)$$

Where $a_i = \sum_{j=1}^{n} P_{ij} \cdot VOC_j$ $b_i = 6.72 \cdot P_{MEK}$

And i is the month, j is the individual coating, n is the total number of coatings, E_{VOC} is the actual 12-month rolling total VOC emissions (tons/year), P_{ij} is the

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actual monthly coating usage (gallons/month), VOC_j is the VOC content for coating j (pounds/gal), P_{MEK} is the MEK cleanup solvent usage (gallons/month) and CE is the overall control efficiency of the incinerator. ***NOTE: Equation a_i above applies only after the total coating (as applied) usage exceeds 1,870,000 gallons. Equation b_i above applies only after the MEK usage exceeds 34,419 gallons.***

f. Organic HAP emissions from each affected coil-coating source shall not exceed 2% of the total organic HAP applied for each month during any 12 consecutive month compliance period (98% reduction) [40 CFR 63.5120(a)(1)].

Compliance Demonstration: Compliance with the operating limits described above shall be determined by:

i. Maintaining the incinerator combustion temperature above what is specified in **1. Operating Limitation** (e) above; and

ii. Demonstrating an overall control efficiency of at least 99% during any stack test.

g. See **SECTION B page 68** below.

h. See **SECTION D 2.g.** below.

3. Testing Requirements:

a. Pursuant to 40 CFR 63, Subpart SSSS:

i. Logan Aluminum shall perform performance tests as specified in §63.516.

ii. Logan Aluminum must establish the operating limits specified in **1. Operation Limitations** (e) above during performance testing according to the requirements in §63.5160(d)(3).

b. Logan Aluminum shall perform a transfer efficiency test on the coating operation.

c. See **SECTION D 3.** below.

d. See **SECTION G 4.** below.

4. Specific Monitoring Requirements: The permittee shall monitor the following:

a. Monthly and 12-month rolling total hours of operation.

b. Hourly aluminum processing rate (based on monthly average).

c. 12-month rolling total aluminum processed.

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d. Monthly coating and solvent usage.

e. 12-month rolling coating and solvent usage.

f. Hourly pollutant emission rates (based on monthly average).

g. 12-month rolling total pollutant emissions.

h. Monthly fuel usage.

i. Monthly visible emissions using EPA Reference Method 9.

j. Combustion temperature of incinerator effluent gases.

k. Incinerator residence time.

l. Coating applicator transfer efficiency.

5. **Specific Recordkeeping Requirements:** The permittee shall retain records of the following:

a. Monthly and 12-month rolling total hours of operation.

b. Hourly aluminum processing rate (based on monthly average).

c. 12-month rolling total aluminum processed.

d. Monthly coating and solvent usage.

e. 12-month rolling coating and solvent usage.

f. Hourly pollutant emission rates (based on monthly average).

g. 12-month rolling total pollutant emissions.

h. Monthly fuel usage.

i. Monthly visible emissions using EPA Reference Method 9 (records kept for 2 years).

j. Continuous readings of the incinerator combustion temperature.

k. MSDS or VOC, HAP and solids composition reports for all the coatings used.

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l. Incinerator and capture system operating parameter data in accordance with §63.5150(a)(3) and (4).

m. Records of any other parameters specified in **4. Specific Monitoring Requirements** above.

6. Specific Reporting Requirements:

a. The permittee shall report all the visible emissions readings that are in excess of the 20% limit specified in this permit semi-annually to the Division's Bowling Green Regional office.

b. The permittee shall report excess VOC emissions on a quarterly basis. If no such instances have occurred during a particular quarter, a semiannual report shall be submitted which states this [40 CFR 60.465(c)].

c. The permittee shall report all 3-hour periods when the incinerator combustion temperature dropped to less than the limits identified in **1.e.** above on a quarterly basis. If no such instances have occurred during a particular quarter, a semiannual report shall be submitted which states this [40 CFR 60.465(d)].

d. Logan Aluminum shall submit the following [40 CFR 63, Subpart SSSS]:
   i. Logan Aluminum shall submit the following [40 CFR 63, Subpart SSSS]:
   ii. A Notification of Performance Test as explained in §63.5180(c).
   iii. A Notification of Compliance Status as explained in §63.5180(d).
   iv. Performance test reports as explained in §63.5180(e).
   v. Start-up, shutdown, and malfunction reports as explained in §63.5180(f).
   vi. Semi-annual compliance reports as explained in §63.5180(g)

e. See **SECTION D 6.a.** below

7. Specific Control Equipment Conditions: The bake oven exhaust gas shall be incinerated for a minimum of 0.5 second.

8. Alternate Operating Scenarios: NA

9. Compliance Schedule: NA

10. Compliance Certification Requirements: See **SECTION D 10.a.** below.

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GROUP REQUIREMENTS: Boilers

Description: These industrial boilers provide steam for the plant.

Unit ID#	Unit Name	Capacity (MMBTU/hr)	Primary Fuel	Secondary Fuels	Construction Commenced
15 (4021-A)	Boiler #1	22	Natural Gas	#2 fuel oil & propane	June 15, 1981
15 (4021-A)	Boiler #2	22	Natural Gas	#2 fuel oil & propane	June 15, 1981
15 (4021-A)	Boiler #3	22	Natural Gas	#2 fuel oil & propane	June 15, 1986
54 (4021-B)	Boiler #4	53	#2 fuel oil	Natural gas & propane	2004
54 (4021-B)	Soot Blower & Baghouse	NA	NA	NA	2004

APPLICABLE REGULATIONS:
401 KAR 59:015 New indirect heat exchangers

1. Operating Limitations:

a. Total natural gas usage shall not exceed the following limits:

Unit ID#	Unit Name	NG'_{an} ($MMft^3/yr$)
15 (4021-A)	Boiler #1-3 (combined)	420
14 (3010-1)	Boiler #4	455

Where NG'_{an} is the allowable 12-month rolling total natural gas usage (million cubic feet/year).

Compliance Demonstration: Compliance with the limits described above shall be determined by comparing the allowable rate to the actual rate as calculated in **SECTION D 1.c.** below.

b. Total #2 fuel oil usage shall not exceed the following limits:

Unit ID#	Unit Name	FO' (MMgal/yr)
15 (4021-A)	Boiler #1-3 (combined)	1,605.67
14 (3010-1)	Boiler #4	3.75

Where FO' is the allowable 12-month rolling total #2 fuel oil usage (million gallons/year).

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Compliance Demonstration: Compliance with the limits described above shall be determined by comparing the allowable rate to the actual rate as calculated below:

$$FO = \sum_{i=1}^{12} FO_i$$

Where i is the month, FO is the actual 12-month rolling total natural gas usage (gallons/year) and FO_i is the actual monthly natural gas usage rate for month i (gallons/month).

c. See **SECTION D 1.d.** below.

2. Emission Limitations:

a. Visible emissions shall not exceed 20% opacity except the opacity shall not exceed 40% for more than six minutes any 60 minutes during cleaning the firebox or blowing soot and except during building a new fire [401 KAR 59:015, Section 4(2)].

b. Particulate emissions shall not exceed the following limits:

Unit ID#	Unit Name	E'_{PMi} (lbs/hr)	E'_{PMf} (lb/MMBTU)
15 (4021-A)	Boiler #1	7.89	0.359
15 (4021-A)	Boiler #2	7.89	0.359
15 (4021-A)	Boiler #3	7.89	0.359
14 (3010-1)	Boiler #4	20.03	0.378

Where i is the month, E'_{PMi} is the allowable average hourly particulate emission rate averaged over month i (pounds/hour) and E'_{PMf} is the allowable fuel usage-based total particulate emission rate (pounds/million BTU).

Compliance Demonstration: Compliance with the operating limits described above shall be determined by comparing the allowable rate to the actual rate as calculated below:

$$E_{PM_i} = \frac{\left(NG_i \cdot EF_{PM_{NG}}\right) + \left(FO_i \cdot EF_{PM_{FO}}\right)}{h_i} \cdot \left(1 - \frac{CE}{100}\right)$$

$$E_{PM_f} = \sum_{i=1}^{12} \frac{\left(NG_i \cdot EF_{PM_{NG}}\right) + \left(FO_i \cdot EF_{PM_{FO}}\right)}{R} \cdot \left(1 - \frac{CE}{100}\right)$$

Where i is the month, E_{PMi} is the actual average hourly particulate emission rate for month i (pounds/hour), NG_i is the natural gas usage for month i (million cubic feet/month), EF_{PMNG} is the overall uncontrolled KYEIS particulate emission factor for natural gas usage (pounds/million cubic feet burned), FO_i is the #2 fuel oil usage for month i (gallons/month), EF_{PMFO} is the overall uncontrolled KYEIS particulate emission factor for #2 fuel oil usage (pounds/gallon), h_i is the actual

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

total hours of operation for month i (hours/month), CE is the overall control efficiency (%), E_{PMf} is the actual fuel usage-based total particulate emission rate (pounds/million BTU) and R is the rated capacity of the boiler (million BTU/hour).

c. Sulfur dioxide emissions shall not exceed the following limits:

Unit ID#	Unit Name	E'$_{SO2i}$ (lbs/hr)	E'$_{SO2}$ (tons/yr)	E'$_{SO2f}$ (lb/MMBTU)
15 (4021-A)	Boiler #1	30.4		1.382
15 (4021-A)	Boiler #2	30.4		1.382
15 (4021-A)	Boiler #3	30.4		1.382
14 (3010-1)	Boiler #4		39	

Where i is the month, E'$_{SO2i}$ is the allowable average hourly SO2 emission rate averaged over month i (pounds/hour) and E'$_{SO2}$ is the allowable 12-month rolling total SO2 emission rate (tons/year) and E'$_{SO2f}$ is the allowable fuel usage-based total SO2 emission rate (pounds/million BTU).

Compliance Demonstration: Compliance with the operating limits described above shall be determined by comparing the allowable rate to the actual rate as calculated below:

$$E_{SO2_i} = \frac{\left(NG_i \cdot EF_{SO2_{NG}}\right) + \left(FO_i \cdot EF_{SO2_{FO}}\right)}{h_i} \cdot \left(1 - \frac{CE}{100}\right)$$

$$E_{SO2} = \sum_{i=1}^{12} \frac{\left(NG_i \cdot EF_{SO2_{NG}}\right) + \left(FO_i \cdot EF_{SO2_{FO}}\right)}{2000} \cdot \left(1 - \frac{CE}{100}\right)$$

$$E_{SO2_f} = \sum_{i=1}^{12} \frac{\left(NG_i \cdot EF_{SO2_{NG}}\right) + \left(FO_i \cdot EF_{SO2_{FO}}\right)}{R} \cdot \left(1 - \frac{CE}{100}\right)$$

Where i is the month, E_{SO2i} is the actual average hourly SO2 emission rate for month i (pounds/hour), NG_i is the natural gas usage for month i (million cubic feet/month), EF_{SO2NG} is the overall uncontrolled KYEIS SO2 emission factor for natural gas usage (pounds/million cubic feet burned), FO_i is the #2 fuel oil usage for month i (gallons/month), EF_{SO2FO} is the overall uncontrolled KYEIS SO2 emission factor for #2 fuel oil usage (pounds/gallon), h_i is the actual total hours of operation for month i (hours/month), CE is the overall control efficiency (%), E_{SO2} is the actual 12-month rolling total SO2 emission rate (tons/year), E_{SO2f} is the actual fuel usage-based total SO2 emission rate (pounds/million BTU) and R is the rated capacity of the boiler (million BTU/hour).

d. See **SECTION D 2.g.** below.

3. Testing Requirements: See **SECTION D 3.** below.

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

4. **Specific Monitoring Requirements:** The permittee shall monitor the following:

a. Monthly and 12-month rolling total hours of operation.

b. Hourly pollutant emission rates (based on monthly average).

c. 12-month rolling total pollutant emissions.

d. Fuel usage-based pollutant emissions.

e. Monthly fuel usage.

f. Weekly visible emissions using EPA Reference Method 9.

g. Monthly sulfur content of #2 fuel oil.

5. **Specific Recordkeeping Requirements:** The permittee shall retain records of the following:

a. Monthly and 12-month rolling total hours of operation.

b. Hourly pollutant emission rates (based on monthly average).

c. 12-month rolling total pollutant emissions.

d. Fuel usage-based pollutant emissions.

e. Monthly natural gas usage.

f. Monthly visible emissions using EPA Reference Method 9 (records kept for 2 years).

g. Records of any other parameters specified in **4. Specific Monitoring Requirements** above.

6. **Specific Reporting Requirements:**

a. The permittee shall report all visible emissions readings in excess of the limits specified in this permit semi-annually to the Division's Bowling Green Regional office.

b. See **SECTION D 6.a.** below

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

7. Specific Control Equipment Conditions:

a. The baghouse shall be properly maintained, kept in good operating condition, used in conjunction with the associated process (Boiler 4) and and operated in accordance with the manufacturer's specifications.

b. The permittee shall maintain an onsite daily log of the pressure drop across the baghouse and ensure it remains in the proper operating range as specified by the manufacturer or in the OM&M plan.

8. Alternate Operating Scenarios: NA

9. Compliance Schedule: NA

10. Compliance Certification Requirements: See **SECTION D 10.a.** below.

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Emissions Unit: 46 (4021-5) **Propane Flare**

Description: The Propane Flare is used periodically to test onsite propane mix.

Construction commenced: June 15, 1981

APPLICABLE REGULATIONS:
401 KAR 63:015 Flares

1. **Operating Limitations:** NA

2. **Emission Limitations:** Visible emissions from the Propane Flare shall not exceed 20% opacity for more than three minutes in any one day [401 KAR 63:015, Section 3].

3. **Testing Requirements:** NA

4. **Specific Monitoring Requirements:** Logan Aluminum shall monitor visible emissions on a monthly basis using EPA Reference Method 9 when the flare is in operation. If flare is not in operation, note in log that it is not in use.

5. **Specific Recordkeeping Requirements:** NA

6. **Specific Reporting Requirements:** NA

7. **Specific Control Equipment Conditions:** NA

8. **Alternate Operating Scenarios:** NA

9. **Compliance Schedule:** NA

10. **Compliance Certification Requirements:** See **SECTION D 10.a.** below.

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Emissions Units: 49 (4021-11) Cooling Tower 1

Description: The Cooling Tower removes heat from process water.

Construction commenced: June 15, 1981

APPLICABLE REGULATIONS:
401 KAR 63:010 Fugitive emissions

1. **Operating Limitations:** NA

2. **Emission Limitations:** Logan Aluminum shall take reasonable precautions to prevent fugitive emissions from Cooling Tower 1 [401 KAR 63:010, Section 3].

3. **Testing Requirements:** NA

4. **Specific Monitoring Requirements:** NA

5. **Specific Recordkeeping Requirements:** NA

6. **Specific Reporting Requirements:** NA

7. **Specific Control Equipment Conditions:** NA

8. **Alternate Operating Scenarios:** NA

9. **Compliance Schedule:** NA

10. **Compliance Certification Requirements:** See **SECTION D 10.a.** below.

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Emissions Unit: 47 (4021-6) **Propane Tanks 1, 2, 3, and 4**

Description: Propane storage for fuel-fired equipment.

Construction commenced: June 15, 1981

APPLICABLE REGULATIONS:
40 CFR Part 68 Chemical accident prevention provisions

1. **Operating Limitations:** NA

2. **Emission Limitations:** NA

3. **Testing Requirements:** NA

4. **Specific Monitoring Requirements:** Specific monitoring requirements will be provided in the risk management plan as required.

5. **Specific Recordkeeping Requirements:** Specific recordkeeping requirements will be provided in the risk management plan as required.

6. **Specific Reporting Requirements:** Submit a risk management plan for propane tanks 1, 2, 3, and 4 if the requirements are applicable to the facility.

7. **Specific Control Equipment Conditions:** NA

8. **Alternate Operating Scenarios:** NA

9. **Compliance Schedule:** NA

10. **Compliance Certification Requirements:** See **SECTION D 10.a.** below.

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

GROUP REQUIREMENTS: Volatile Organic Storage Tanks

Description: Volatile organic storage.

Unit ID#	Unit Name	Construction Commenced
24 (3040-5)	Cold Mill 3 Tanks TA01, TA02, TA05	June 26, 1991
45 (1004-1)	Castor Oil Tank	June 15, 1988
48 (4021-10)	Water Services Tanks 4, 6A	June 15, 1981
48 (4021-10)	Water Services Tanks 6B, 8	June 1, 1990
51 (6035-A)	Coating Tanks A, B, and C	June 9, 1992

APPLICABLE REGULATIONS:
40 CFR 60 Subpart Kb Standards of performance for volatile organic liquid storage vessels

1. **Operating Limitations:** NA

2. **Emission Limitations:** See **SECTION B page 68** below.

3. **Testing Requirements:** NA

4. **Specific Monitoring Requirements:** NA

5. **Specific Recordkeeping Requirements:** NA

6. **Specific Reporting Requirements:** Retain records showing the dimensions and capacity of each tank for the life of the tanks [40 CFR 60.116b(b)].

7. **Specific Control Equipment Conditions:** NA

8. **Alternate Operating Scenarios:** NA

9. **Compliance Schedule:** NA

10. **Compliance Certification Requirements:** See **SECTION D 10.a.** below.

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

GROUP REQUIREMENTS: Liquid Petroleum Storage Tanks

Description: Petroleum storage.

Unit ID#	Unit Name	Construction Commenced
50 (4021-15)	Gasoline Tank	June 15, 1990
50 (4021-15)	Diesel Tank	June 15, 1990
52 (6035-3)	Waste Solvent Tank 3	June 9, 1992

APPLICABLE REGULATIONS:
40 CFR 60 Subpart Kb Standards of performance for volatile organic liquid storage vessels

1. **Operating Limitations:** NA

2. **Emission Limitations:** NA

3. **Testing Requirements:** NA

4. **Specific Monitoring Requirements:** NA

5. **Specific Recordkeeping Requirements:** NA

6. **Specific Reporting Requirements:** NA

7. **Specific Control Equipment Conditions:**

   a. The Gasoline Tank shall be equipped with a permanent submerged fill pipe [401 KAR 59:050, Section 3(2)].

   b. Waste Solvent Tank 3 shall be equipped with a permanent submerged fill pipe [401 KAR 59:050, Section 3(2)].

8. **Alternate Operating Scenarios:** NA

9. **Compliance Schedule:** NA

10. **Compliance Certification Requirements:** See **SECTION D 10.a.** below.

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

GROUP REQUIREMENTS: Plant-wide emissions of aluminum metal and oxide, arsenic, cadmium, chromium metal, cobalt, copper, formaldehyde, hydrogen chloride, and selenium are subject to Regulation 401 KAR 63:022. The following units are affected:

Unit ID#	Unit Name	Construction Commenced
01 (1002-1)	Aluminum Skimming House	June 15, 1981
02 (1005-1A&B)	DC1 Pre-Heater and Melt Furnace (East)	June 15, 1981
03 (1005-4A&B)	DC2 Pre-Heater and Melt Furnace (West)	June 15, 1981
04 (1005-2)	DC1 Hold Furnace (East)	June 15, 1981
06 (2010-A&B)	Carbottom Furnaces 1 - 7	June 15, 1981
07 (2015-1)	Reversing Mill	June 15, 1981
08 (2015-2)	Finishing Mill	June 15, 1981
09 (6020-A)	Coating Line 1	June 15, 1981
10 (3005-1)	Cold Mill 1	June 15, 1981
14 (3010-1)	Cold Mill 2	June 15, 1981
17 (1005-5)	DC2 Hold Furnace (West)	June 15, 1981
18 (2011-A)	Pusher Furnaces 1 and 2	January 16, 1990
19 (2011-B)	Pusher Furnace 3	October, 1999
21 (3040-1A)	Cold Mill 3	January 7, 1991
22 (1001-1)	DC Flux Boxes	June 15, 1981 November 26, 1991
24 (3040-5)	Cold Mill 3 Tanks TA01, TA02, TA05	June 26, 1991
25 (1009-1)	Swarf Furnace Chip Conveyor	November 15, 1997
26 (1009-1A-C)	Swarf Furnace with Molten Metal Holder	November 15, 1997
27 (1008-1)	Reservoir Furnace	October 2, 1997
40 (1006-2)	DC3 Melt Furnace	November 26, 1991
42 (1006-2)	DC3 Hold Furnace	November 26, 1991
45 (1004-1)	Castor Oil Tank	June 15, 1988
48 (4021-10)	Water Services Tanks 4, 6A	June 15, 1981 June 1, 1990
51 (6035-A)	Coating Tanks A, B, and C	June 9, 1992
55 (1111-1)	Electric Induction Furnace	June 15, 1981

APPLICABLE REGULATION:
401 KAR 63:021 Existing Sources Emitting Toxic Air Pollutants

1. **Operating Limitations:** See specific operating limitations under individual emission point listing.

2. **Emission Limitations:** Pursuant to 401 KAR 63:021, the hourly allowables for the affected facilities listed above shall not be exceed the following limits based on 24-hr average:

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Air Toxic	E'_{Xi} (lb/hr)
Aluminum metal and oxide	100.2
Arsenic	2.0
Cadmium	5.0
Chromium metal	5.0
Cobalt	1.0
Copper	10.0
Formaldehyde	19.8
Hydrogen chloride	227.5
Selenium	2.0
Phosphoric acid	39.6
Potassium hydroxide	79.3

Where i is the month, X is the pollutant and E'_{Xi} is the allowable emission rate of pollutant X averaged over month i (pounds/hr).

Compliance Demonstration: Compliance with the limits described above shall be determined by comparing the allowable rate to the actual rate as calculated below:

$$E_{X_i} = \sum_{j=1}^{n} \frac{P_{ij} \cdot EF_{X_j}}{h_{ij}}$$

Where i is the month, j is the emission point, n is the total number of emission points, X is the pollutant, E_{xi} is the actual average hourly emission rate of pollutant X for month i (pounds/hour), P_{ij} is the actual specific operating parameter for month i at emission unit j (point specific units/month), EF_{Xj} is the KYEIS emission factor for pollutant X at emission unit j (pounds/point specific units) and h_i is the monthly hours of operation (hours/month).

3. **Testing Requirements:** See specific testing requirements for each individual emission point listed.

4. **Specific Monitoring Requirements:** See specific monitoring requirements for each individual emission point listed.

5. **Specific Recordkeeping Requirements:** See specific reporting requirements for each individual emission point listed.

6. **Specific Reporting Requirements:** NA

7. **Specific Control Equipment Conditions:** See specific control equipment conditions for each individual emission point listed.

8. **Alternate Operating Scenarios:** NA

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

9. **Compliance Schedule:** NA

10. **Compliance Certification Requirements:** See **SECTION D 10.a.** below.

SECTION C – INSIGNIFICANT ACTIVITIES

The following listed activities have been determined to be insignificant activities for this source pursuant to 401 KAR 52:020, Section 6. While these activities are designated as insignificant the permittee must comply with the applicable regulation and some minimal level of periodic monitoring may be necessary.

	Description	Generally Applicable Regulation
1.	Caustic Tank	401 KAR 63:010
2.	Castor Return Sump	401 KAR 63:010
3.	Hot Mill Tanks (1-18)	401 KAR 59:010 401 KAR 63:010
4.	CM1 Dowtherm Boiler	NA
5.	Cold Mill 1 Tanks (1-10, 13)	401 KAR 59:010 401 KAR 63:010
6.	Cold Mill 1 Tank 11	401 KAR 59:010 401 KAR 63:010
7.	Cold Mill 1 Tank 12	401 KAR 59:010 401 KAR 63:010
8.	Used Oil Tank	401 KAR 59:010 401 KAR 63:010
9.	CM2 Dowtherm Boiler	NA
10.	Roll Grinding Coolant Tank	401 KAR 59:010 401 KAR 63:010
11.	CM3 Mixers	NA
12.	Cold Mill 3 Tanks (TA03, TA04, TA06-TA10)	401 KAR 59:010 401 KAR 63:010
13.	Space Heaters	401 KAR 59:015
14.	Induced Air Flotation Units: IAF 1, IAF 2, IAF 3	401 KAR 63:010
15.	Lamella Settler Building	401 KAR 63:010
16.	Clarifier Building	401 KAR 63:010
17.	Water Services Tanks (WS Tanks 5, 7A, 7B, 7C, 9, 10, 11, 12, 13A, 13B, 13C, 14, 15A, 15B, 15C, 16A, 16B, 17, WS Sump)	401 KAR 59:010 401 KAR 63:010
18.	Cooling Tower 2	401 KAR 59:010 401 KAR 63:010

SECTION C – INSIGNIFICANT ACTIVITIES

19.	Cooling Tower 3	401 KAR 59:010 401 KAR 63:010
20.	Lime Silo and Baghouse	401 KAR 59:010
21.	Diesel Tank	401 KAR 59:010 401 KAR 63:010
22.	Parts Washer in Remelt Area	401 KAR 63:010
23.	Parts Washer in Hot Mill Area	401 KAR 63:010
24.	Parts Washer in Maintenance Services	401 KAR 63:010
25.	Parts Washer in Cold Mill Area	401 KAR 63:010
26.	Parts Washer in Finishing Area	401 KAR 63:010
27.	Large Parts Washer in Roll Shop	401 KAR 63:010
28.	Small Parts Washer in Roll Shop	401 KAR 63:010
29.	Tension Leveler	NA
30.	Slitter 1	NA
31.	Slitter 2	NA
32.	Slitter 3	NA
33.	Coating Mix Room 1 Tanks: 1,2,3,4,5,6.	401 KAR 59:010 401 KAR 63:010
34.	Solvent Tank 1	401 KAR 59:010 401 KAR 63:010
35.	Solvent Tank 1	401 KAR 59:010 401 KAR 63:010
36.	Coating Pump Room Fugitives	401 KAR 63:010
37.	Coating Lab Vent Hoods	401 KAR 59:010
38.	Landfill	401 KAR 63:010
39.	Landfarm	401 KAR 63:010
40.	Two coolant tanks, CM1 and CM2 to serve the respective mill.	401 KAR 63:010
41.	Chlorine Building	NA
42.	Wastewater Evaporator	NA

SECTION D – SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS

As required by Section 1b of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26; compliance with annual emissions and processing limitations contained in this permit, shall be based on emissions and processing rates for any twelve (12) consecutive months.

1. Operating Limitations:

a. Compliance with annual operating limitations shall be based on emissions and processing rates for any consecutive 365 days.

b. Compliance with the operating limits described in **SECTION B** above shall be determined by comparing the allowable rate to the actual rate as calculated below:

$$P_{hr_i} = \frac{P_{mo_i}}{h_{mo_i}} \cdot C$$

$$P_{an} = \sum_{i=1}^{12} P_{mo_i}$$

Where i is the month, P_{hri} is the average operating rate for month i (units/hour), P_{moi} is the total specific operating parameter for month i (units/month), h_{moi} is the total hours of operation for month i (hours/month), C is the appropriate conversion factor and P_{an} is the actual 12-month rolling total specific operating parameter (units/year). Note that the specific operating parameter and corresponding units precede the numerical limit listed in **SECTION B** (e.g. material processed (tons), natural gas burned ($MMft^3$), coating applied (gallons), etc.).

c. Compliance with the operating limits described in **SECTION B** above shall be determined by comparing the allowable rate to the actual rate as calculated in below:

$$NG = \sum_{i=1}^{12} NG_i$$

Where i is the month, NG is the actual 12-month rolling total natural gas usage ($MMft^3$/year) and NG_i is the actual monthly natural gas usage rate for month i ($MMft^3$/month). If a natural gas flow meter malfunctions, then the average daily natural gas usage rate may be used.

d. Propane may be used as an alternate fuel in the case of natural gas curtailment. Propane shall not be used as a back up fuel for more than 1500 hrs/yr based on a 12-month rolling total.

Compliance Demonstration: To show compliance with the propane operating limitation, Logan Aluminum shall keep records of the total hours of operation each month that propane is being used and ensure the total hours of operation

SECTION D – SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS

remain below 1500 hrs during any rolling 12-month period. If a propane flow meter malfunctions, then Logan Aluminum shall utilize an average daily usage as an acceptable estimate.

2. Emission Limitations:

a. Carbon monoxide, nitrogen oxides, particulate matter, sulfur dioxide, and VOC emissions, as measured by methods referenced in 401 KAR 50:015, Section 1, shall not exceed the respective limitations specified herein. Applicable test methods include the following:

i. Opacity – Reference Method 9 or an acceptable alternate method [401 KAR 59:010, Section 4(5)].
ii. Particulate matter – Reference Method 5 or Reference Method 17 or an acceptable alternate method [401 KAR 59:010, Section 4(1)].
iii. Sulfur dioxides – Reference Method 6 or an acceptable alternate method [401 KAR 59:015, Section 8(1)(d)].
iv. VOC – Reference Method 25 or Reference Method 25A [40 CFR 60.466(a)(2)].
v. VOC content of coatings – Reference Method 24 or data provided by the formulator of the coating (manufacturer's formulation data) [40 CFR 60.466(a)(1)].
vi. Nitrogen oxides – Reference Method 7 or an acceptable alternate method [401 KAR 59:015, Section 8(1)(e)].

b. Compliance with annual emission limitations shall be based on emissions and processing rates for any consecutive 365 days.

c. Compliance with the particulate emission limits described in **SECTION B** above shall be determined by comparing the allowable rate to the actual rate as calculated below:

$$E_{PM_i} = \frac{P_i \cdot EF_{PM}}{h_i} \cdot \left(1 - \frac{CE}{100}\right)$$

$$E_{PM} = \sum_{i=1}^{12} \frac{P_i \cdot EF_{PM}}{2000} \cdot \left(1 - \frac{CE}{100}\right)$$

Where i is the month, E_{PMi} is the actual average hourly particulate emission rate for month i (pounds/hour), P_i is the actual specific operating parameter for month i (units/month), EF_{PM} is the overall uncontrolled KYEIS particulate emission factor (pounds/unit), h_i is the actual total hours of operation for month i (hours/month), CE is the overall control efficiency (%), and E_{PM} is the actual 12-month rolling total particulate emissions (tons/year). Note that the specific operating parameter and corresponding unit precedes the numerical limit listed in **SECTION B 1. Operating Limitations** (e.g. material processed (tons), natural gas burned ($MMft^3$), coating applied (gallons), etc.).

SECTION D – SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS

d. Plant-wide VOC emissions shall not exceed 90 tons/year based on a 12-month rolling total.

e. Plant-wide HAP emissions shall not exceed:
   i. 9.5 tons/year individual HAP emissions based on a 12-month rolling total.
   ii. 22.5 tons/year combined HAP emissions based on a 12-month rolling total.

f. Pursuant to 40 CFR Part 63 Subpart RRR:
   i. If each existing unit within the SAPU is in compliance with individual emission limits, then Logan Aluminum shall be considered to be in compliance and the three-day rolling SAPU calculation shall not be required.
   ii. If the source cannot or chooses not to demonstrate compliance with the individual limits, Logan Aluminum shall maintain a 3-day rolling average of the SAPU emission limits.
   iii. SAPU emission limits for each pollutant shall be determined by applying the following equation:

$$E'_X = \frac{\sum_{j=1}^{n} (L_{Xi} \cdot P_i)}{\sum_{j=1}^{n} (P_i)}$$

Where, j is the unit, n is the total number of units in the SAPU, X indicates the specific pollutant, E'_X is the allowable SAPU emissions for pollutant X (pounds/ton material charged), L_{Xi} is the emission limit for pollutant X specific to unit i (pounds/tons material charged), and P_i is the operating rate for unit i (tons material charged/hour).

Compliance Demonstration: The 3-day rolling average for an individual SAPU shall be calculated with the following equations:

$$E_X = \frac{\sum_{i=1}^{3} E_{Xi}}{3}$$

$$E_{Xi} = \frac{\sum_{j=1}^{n} X_j \cdot P_{ij}}{\sum_{j=1}^{n} P_{ij}}$$

Where E_X is the 3-day rolling average emissions of pollutant X (pounds/tons material processed), i is the day, j is the unit, n is the total number of units in SAPU, E_{Xi} is the estimated actual emissions from the

SECTION D – SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS

SAPU on day i (pounds/tons material charged), X_j is the measured emission rate of pollutant X from emission unit j as determined in the performance test (pounds/ton of material processed), and P_{ij} is the total amount of material processed in unit j on day i (tons).

g. Emissions from the original plant shall not exceed 250 tons per year of any criteria pollutant. Emissions from the original plant include contributions from the following emission points:

Unit ID#	Unit Name	Construction Commenced
01 (1002-1)	Aluminum Skimming House	June 15, 1981
02 (1005-1A&B)	DC1 Pre-Heater and Melt Furnace (East)	June 15, 1981
03 (1005-4A&B)	DC2 Pre-Heater and Melt Furnace (West)	June 15, 1981
04 (1005-2)	DC1 Hold Furnace (East)	June 15, 1981
05 (2005-1A-C)	Scalper 1	June 15, 1981
06 (2010-A&B)	Carbottom Furnaces 1 - 7	June 15, 1981
07 (2015-1)	Reversing Mill	June 15, 1981
08 (2015-2)	Finishing Mill	June 15, 1981
09 (6020-A)	Coating Line 1	June 15, 1981
10 (3005-1)	Cold Mill 1	June 15, 1981
12 (3030-A,B,C,D)	Annealing Furnaces 1, 2, 3, 4, and 5	June 15, 1981
14 (3010-1)	Cold Mill 2	June 15, 1981
15 (4021-A)	Boiler #1-3	June 15, 1986
17 (1005-5)	DC2 Hold Furnace (West)	June 15, 1981
22 (1001-1)	DC Flux Boxes	June 15, 1981
46 (4021-5)	Propane Flare	June 15, 1981
47 (4021-6)	Propane Tanks 1, 2, 3, and 4	June 15, 1981
48 (4021-10)	Water Services Tanks 4, 6A	June 15, 1981 June 1, 1990
49 (4021-11)	Cooling Tower 1	June 15, 1981
55 (1111-1)	Electric Induction Furnace	June 15, 1981

Compliance Demonstration: Compliance with the emission limits described above shall be determined by comparing the allowable rate to the actual rate as calculated below:

$$E_X = \sum_{i=1}^{12}\sum_{j=1}^{n}\frac{P_{ij}\cdot EF_{X_j}}{2000}\cdot\left(1-\frac{CE}{100}\right)$$

Where i is the month, j is the emission unit, n is the total number of emission units, X is the pollutant, E_X is the actual 12-month rolling total emissions of

SECTION D – SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS

pollutant X (tons/year), P_{ij} is the actual specific operating parameter for unit j during month i (units/month), EF_{Xj} is the overall uncontrolled KYEIS emission factor for pollutant X from unit j (pounds/unit), and CE is the overall control efficiency (%). Note that the specific operating parameter and corresponding units for each individual source precedes the numerical limit listed in **SECTION B 1. Operating Limitations** (e.g. material processed (tons), natural gas burned ($MMft^3$), coating applied (gallons), etc.).

h. Emissions from all emission points listed on permit # F-97-003 shall not exceed 250 tons per year of any criteria pollutant. Permit F-97-003, lists the following emission points:

Unit ID#	Unit Name	Construction Commenced
01 (1002-1)	Aluminum Skimming House	June 15, 1981
02 (1005-1A&B)	DC1 Pre-Heater and Melt Furnace (East)	June 15, 1981
03 (1005-4A&B)	DC2 Pre-Heater and Melt Furnace (West)	June 15, 1981
04 (1005-2)	DC1 Hold Furnace (East)	June 15, 1981
07 (2015-1)	Reversing Mill (incremental increase)	June 15, 1981
08 (2015-2)	Finishing Mill (incremental increase)	June 15, 1981
17 (1005-5)	DC2 Hold Furnace (West)	June 15, 1981
18 (2011-A)	Pusher Furnaces 1 and 2	January 16, 1990
21 (3040-1A)	Cold Mill 3	January 7, 1991
22 (1001-1)	DC Flux Boxes	June 15, 1981 November 26, 1991
23	Cold Mill Mixer	
24 (3040-5)	Cold Mill 3 Tanks TA01, TA02, TA05	June 26, 1991
25 (1009-1)	Swarf Furnace Chip Conveyor	November 15, 1997
26 (1009-1A-C)	Swarf Furnace with Molten Metal Holder	November 15, 1997
27 (1008-1)	Reservoir Furnace	October 2, 1997
28	Water Services Tanks	
40 (1006-2)	DC3 Melt Furnace	November 26, 1991
42 (1006-2)	DC3 Hold Furnace	November 26, 1991
55 (1111-1)	Electric Induction Furnace	June 15, 1981

SECTION D – SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS

Compliance Demonstration: Compliance with the emission limits described above shall be determined by comparing the allowable rate to the actual rate as calculated below:

$$E_X = \sum_{i=1}^{12}\sum_{j=1}^{n}\frac{P_{ij}\cdot EF_{X_j}}{2000}\cdot\left(1-\frac{CE}{100}\right)$$

Where i is the month, j is the emission unit, n is the total number of emission units, X is the pollutant, E_X is the actual 12-month rolling total emissions of pollutant X (tons/year), P_{ij} is the actual specific operating parameter for unit j during month i (units/month), EF_{Xj} is the overall uncontrolled KYEIS emission factor for pollutant X from unit j (pounds/unit), and CE is the overall control efficiency (%). Note that the specific operating parameter and corresponding units for each individual source precedes the numerical limit listed in **SECTION B 1. Operating Limitations** (e.g. material processed (tons), natural gas burned ($MMft^3$), coating applied (gallons), etc.).

3. **Testing Requirements:** Testing shall be conducted in accordance with 401 KAR 50:045, Section (1); 401 KAR 59:005, Section 2 (2) and/or 40 CFR 63 Subpart RRR.

4. **Specific Monitoring Requirements:**

a. The permittee shall monitor monthly and 12-month rolling total criteria pollutant emissions from the units listed in **SECTION D 2.g.** and **2.h.** above.

b. To provide reasonable assurance that the visible emission limitations are being met, the permittee shall:
   i. Perform a qualitative visual observation of the opacity emissions from each building opening, stack or vent on a weekly basis, during unit operation and maintain a log of the observations.
   ii. Determine the opacity of emissions by Reference Method 9 if visible emissions from any building or structure opening exceed the applicable standard.

5. **Specific Recordkeeping Requirements:**

a. The permittee shall maintain onsite reports of monthly and 12-month rolling total criteria pollutant emissions from the units listed in **SECTION D 2.g.** and **2.h.** above.

b. For each opening, stack or vent, the permittee shall maintain a log of the qualitative visual observations performed. The log shall note:
   i. Whether any air emissions (except for water vapor) were visible from the opening, stack or vent.
   ii. Whether the visible emissions were normal for the process.

SECTION D – SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS

6. Specific Reporting Requirements:

a. Logan Aluminum shall submit reports and records required in **SECTION B** and **SECTION D 5. Specific Recordkeeping Requirements** semi-annually to the Division's Bowling Green Regional Office by January 30 and July 30 each year.

b. Logan Aluminum must submit the results of any performance test conducted, including one complete report documenting test methods and procedures, process operation, and monitoring parameters ranges or values for each test used for a particular type or emission point tested.

c. See **SECTION F** below.

7. Specific Control Equipment Operating Conditions: NA

8. Alternate Operating Scenarios: NA

9. Compliance Schedule: See **SECTION I** below.

10. Compliance Certification Requirements:

a. Logan Aluminum shall submit a Compliance Certification on an annual basis.

b. See **SECTION F** below.

SECTION E – SOURCE CONTROL EQUIPMENT REQUIREMENTS

Pursuant to 401 KAR 50:055, Section 2(5), at all times, including periods of startup, shutdown and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Division which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

SECTION F – MONITORING, RECORD KEEPING, AND REPORTING REQUIREMENTS

1. Pursuant to Section 1b (IV) 1 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26, when continuing compliance is demonstrated by periodic testing or instrumental monitoring, the permittee shall compile records of required monitoring information that include:

    a. Date, place (as defined in this permit), and time of sampling or measurements;

    b. Analyses performance dates;

    c. Company or entity that performed analyses;

    d. Analytical techniques or methods used;

    e. Analyses results; and

    f. Operating conditions during time of sampling or measurement.

2. Records of all required monitoring data and support information, including calibrations, maintenance records, and original strip chart recordings, and copies of all reports required by the Division for Air Quality, shall be retained by the permittee for a period of five years and shall be made available for inspection upon request by any duly authorized representative of the Division for Air Quality [Sections 1b(IV) 2 and 1a(8) of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

3. In accordance with the requirements of 401 KAR 52:020 Section 3(1)h the permittee shall allow authorized representatives of the Cabinet to perform the following during reasonable times:

    a. Enter upon the premises to inspect any facility, equipment (including air pollution control equipment), practice, or operation;

    b. To access and copy any records required by the permit;

    c. Sample or monitor, at reasonable times, substance or parameters to assure compliance with the permit or any applicable requirements (reasonable times are defined as during all hours of operation, during normal office hours, or during and emergency).

4. No person shall obstruct, hamper, or interfere with any Cabinet employee or authorized representative while in the process of carrying out official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.

SECTION F – MONITORING, RECORD KEEPING, AND REPORTING REQUIREMENTS

5. Summary reports of any monitoring required by this permit, other than continuous emission or opacity monitors, shall be submitted to the Regional Office listed on the front of this permit at least every six (6) months during the life of this permit, unless otherwise stated in this permit. For emission units that were still under construction or which had not commenced operation at the end of the 6-month period covered by the report and are subject to monitoring requirements in this permit, the report shall indicate that no monitoring was performed during the previous six months because the emission unit was not in operation [Section 1b (V)1 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

6. The semi-annual reports are due by January 30th and July 30th of each year. Data from the continuous emission and opacity monitors shall be reported to the Technical Services Branch in accordance with the requirements of 401 KAR 59:005, General Provisions, Section 3(3). All reports shall be certified by a responsible official pursuant to 401 KAR 52:020 Section 23. All deviations from permit requirements shall be clearly identified in the reports.

7. In accordance with the provisions of 401 KAR 50:055, Section 1 the owner or operator shall notify the Regional Office listed on the front of this permit concerning startups, shutdowns, or malfunctions as follows:

    a. When emissions during any planned shutdowns and ensuing startups will exceed the standards notification shall be made no later than three (3) days before the planned shutdown, or immediately following the decision to shut down, if the shutdown is due to events which could not have been foreseen three (3) days before the shutdown.

    b. When emissions due to malfunctions, unplanned shutdowns and ensuing startups are or may be in excess of the standards notification shall be made as promptly as possible by telephone (or other electronic media) and shall submit written notice upon request.

8. The owner or operator shall report emission related exceedances from permit requirements including those attributed to upset conditions (other than emission exceedances covered by Section F.7. above) to the Regional Office listed on the front of this permit within 30 days. Other deviations from permit requirements shall be included in the semiannual report required by Section F.6 [Section 1b (V) 3, 4. of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

9. Pursuant to 401 KAR 52:020, Permits, Section 21, the permittee shall annually certify compliance with the terms and conditions contained in this permit, by completing and returning a Compliance Certification Form (DEP 7007CC) (or an alternative approved by

SECTION F – MONITORING, RECORD KEEPING, AND REPORTING REQUIREMENTS

the regional office) to the Regional Office listed on the front of this permit and the U.S. EPA in accordance with the following requirements:

a. Identification of each term or condition;

b. Compliance status of each term or condition of the permit;

c. Whether compliance was continuous or intermittent;

d. The method used for determining the compliance status for the source, currently and over the reporting period.

e. For an emissions unit that was still under construction or which has not commenced operation at the end of the 12-month period covered by the annual compliance certification, the permittee shall indicate that the unit is under construction and that compliance with any applicable requirements will be demonstrated within the timeframes specified in the permit.

f. The certification shall be postmarked by January 30th of each year. **Annual compliance certifications should be mailed to the following addresses:**

Division for Air Quality Bowling Green Regional Office 1508 Western Avenue Bowling Green, KY 42104-3356	Division for Air Quality Central Files 803 Schenkel Lane Frankfort, KY 40601

10. In accordance with 401 KAR 52:020, Section 22, the permittee shall provide the Division with all information necessary to determine its subject emissions within thirty (30) days of the date the KYEIS emission survey is mailed to the permittee.

11. Pursuant to Section VII (3) of the policy manual of the Division for Air Quality as referenced in 401 KAR 50:016, Section 1(1), results of performance test(s) required by the permit shall be submitted to the Division by the source or its representative within forty-five days after the completion of the fieldwork.

SECTION G – GENERAL CONDITIONS

1. General Compliance Requirements

a. The permittee shall comply with all conditions of this permit. Noncompliance shall be a violation of 401 KAR 52:020 and of the Clean Air Act and is grounds for enforcement action including but not limited to termination, revocation and reissuance, revision or denial of a permit [Section 1a, 3 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020 Section 26].

b. The filing of a request by the permittee for any permit revision, revocation, reissuance, or termination, or of a notification of a planned change or anticipated noncompliance, shall not stay any permit condition [Section 1a, 6 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

c. This permit may be revised, revoked, reopened and reissued, or terminated for cause in accordance with 401 KAR 52:020, Section 19. The permit will be reopened for cause and revised accordingly under the following circumstances:
   i. If additional applicable requirements become applicable to the source and the remaining permit term is three (3) years or longer. In this case, the reopening shall be completed no later than eighteen (18) months after promulgation of the applicable requirement. A reopening shall not be required if compliance with the applicable requirement is not required until after the date on which the permit is due to expire, unless this permit or any of its terms and conditions have been extended pursuant to 401 KAR 52:020, Section 12;
   ii. The Cabinet or the U. S. EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements;
   iii. The Cabinet or the U. S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

d. Proceedings to reopen and reissue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Re-openings shall be made as expeditiously as practicable. Re-openings shall not be initiated before a notice of intent to reopen is provided to the source by the Division, at least thirty (30) days in advance of the date the permit is to be reopened, except that the Division may provide a shorter time period in the case of an emergency;

e. The permittee shall furnish information upon request of the Cabinet to determine if cause exists for modifying, revoking and reissuing, or terminating the permit; or compliance with the conditions of this permit [Section 1a, 7,8 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

SECTION G – GENERAL CONDITIONS

f. The permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such facts or corrected information to the permitting authority [401 KAR 52:020, Section 7(1)].

g. Any condition or portion of this permit that becomes suspended or is ruled invalid as a result of any legal or other action shall not invalidate any other portion or condition of this permit [Section 1a, 14 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

h. The permittee shall not use as a defense in an enforcement action the contention that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance [Section 1a, 4 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

i. Except for requirements identified in this permit as state-origin requirements, all terms and conditions shall be enforceable by the United States Environmental Protection Agency and citizens of the United States [Section 1a, 15 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

j. This permit shall be subject to suspension if the permittee fails to pay all emissions fees within 90 days after the date of notice as specified in 401 KAR 50:038, Section 3(6) [Section 1a, 10 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

k. Nothing in this permit shall alter or affect the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance [401 KAR 52:020, Section 11(3)(b)].

l. This permit does not convey property rights or exclusive privileges [Section 1a, 9 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

m. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Kentucky Cabinet for Environmental and Public Protection or any other federal, state, or local agency.

SECTION G – GENERAL CONDITIONS

n. Nothing in this permit shall alter or affect the authority of U.S. EPA to obtain information pursuant to Federal Statute 42 USC 7414, Inspections, monitoring, and entry [401 KAR 52:020, Section 11(3)(d)].

o. Nothing in this permit shall alter or affect the authority of U.S. EPA to impose emergency orders pursuant to Federal Statute 42 USC 7603, Emergency orders [401 KAR 52:020, Section 11(3)(a)].

p. This permit consolidates the authority of any previously issued PSD, NSR, or Synthetic minor source preconstruction permit terms and conditions for various emission units and incorporates all requirements of those existing permits into one single permit for this source.

q. Pursuant to 401 KAR 52:020, Section 11, a permit shield shall not protect the owner or operator from enforcement actions for violating an applicable requirement prior to or at the time of issuance. Compliance with the conditions of a permit shall be considered compliance with:
   i. Applicable requirements that are included and specifically identified in the permit; and
   ii. Non-applicable requirements expressly identified in this permit.

r. Pursuant to Section VII 2 (1) of the policy manual of the Division for Air Quality as referenced by 401 KAR 50:016, Section 1.(1), at least one month prior to the date of a required performance test, the permittee shall complete and return a Compliance Test Protocol (Form DEP 6027) to the Division's Frankfort Central Office. Pursuant to 401 KAR 50:045, Section 5, the Division shall be notified of the actual test date at least ten (10) days prior to the test.

2. Permit Expiration and Reapplication Requirements

a. This permit shall remain in effect for a fixed term of five (5) years following the original date of issue. Permit expiration shall terminate the source's right to operate unless a timely and complete renewal application has been submitted to the Division at least six months prior to the expiration date of the permit. Upon a timely and complete submittal, the authorization to operate within the terms and conditions of this permit, including any permit shield, shall remain in effect beyond the expiration date, until the renewal permit is issued or denied by the Division [401 KAR 52:020, Section 12].

b. The authority to operate granted shall cease to apply if the source fails to submit additional information requested by the Division after the completeness determination has been made on any application, by whatever deadline the Division sets [401 KAR 52:020 Section 8(2)].

SECTION G – GENERAL CONDITIONS

3. Permit Revisions

a. A minor permit revision procedure may be used for permit revisions involving the use of economic incentive, marketable permit, emission trading, and other similar approaches, to the extent that these minor permit revision procedures are explicitly provided for in the SIP or in applicable requirements and meet the relevant requirements of 401 KAR 52:020, Section 14(2).

b. This permit is not transferable by the permittee. Future owners and operators shall obtain a new permit from the Division for Air Quality. The new permit may be processed as an administrative amendment if no other change in this permit is necessary, and provided that a written agreement containing a specific date for transfer of permit responsibility coverage and liability between the current and new permittee has been submitted to the permitting authority within ten (10) days following the transfer.

4. Construction, Start-Up, and Initial Compliance Demonstration Requirements

a. Pursuant to a duly submitted application the Kentucky Division for Air Quality hereby authorizes the construction/modification of emission points 09(6020-A) and 07 (2015-1) in accordance with the terms and conditions of this permit.

b. Construction of any process and/or air pollution control equipment authorized by this permit shall be conducted and completed only in compliance with the conditions of this permit.

c. Within thirty (30) days following commencement of construction and within fifteen (15) days following start-up and attainment of the maximum production rate specified in the permit application, or within fifteen (15) days following the issuance date of this permit, whichever is later, the permittee shall furnish to the Regional Office listed on the front of this permit in writing, with a copy to the Division's Frankfort Central Office, notification of the following:
   i. The date when construction commenced.
   ii. The date of start-up of the affected facilities listed in this permit.
   iii. The date when the maximum production rate specified in the permit application was achieved.

d. Pursuant to 401 KAR 52:020, Section 3(2), unless construction is commenced within eighteen (18) months after the permit is issued, or begins but is discontinued for a period of eighteen (18) months or is not completed within a reasonable timeframe then the construction and operating authority granted by this permit for those affected facilities for which construction was not completed shall immediately become invalid. Upon written request, the Cabinet may extend these time periods if the source shows good cause.

SECTION G – GENERAL CONDITIONS

e. For those affected facilities for which construction is authorized by this permit, a source shall be allowed to construct with the proposed permit. Operational or final permit approval is not granted by this permit until compliance with the applicable standards specified herein has been demonstrated pursuant to 401 KAR 50:055. If compliance is not demonstrated within the prescribed timeframe provided in 401 KAR 50:055, the source shall operate thereafter only for the purpose of demonstrating compliance, unless otherwise authorized by Section I of this permit or order of the Cabinet.

f. This permit shall allow time for the initial start-up, operation, and compliance demonstration of the affected facilities listed herein. However, within sixty (60) days after achieving the maximum production rate at which the affected facilities will be operated but not later than 180 days after initial start-up of such facilities, the permittee shall conduct a performance demonstration ***(test)*** on the affected facilities in accordance with 401 KAR 50:055, General compliance requirements. ***These performance tests must also be conducted in accordance with General Provisions G(d)7 of this permit and the permittee must furnish to the Division for Air Quality's Frankfort Central Office a written report of the results of such performance test***.

g. Terms and conditions in this permit established pursuant to the construction authority of 401 KAR 51:017 or 401 KAR 51:052 shall not expire.

h. Pursuant to Section VII 1 (2 and 3) of the policy manual of the Division for Air Quality as referenced by 401 KAR 50:016, Section 1.(1), if a demonstration of compliance, through performance testing was made at a production rate less than the maximum specified in the application form, then the permittee is only authorized to operate at a rate that is not greater than 110% of the rate demonstrated during performance testing. If and when the facility is capable of operation at the rate specified in the application, compliance must be demonstrated at the new production rate if required by the Division.

5. Acid Rain Program Requirements

If an applicable requirement of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act) is more stringent than an applicable requirement promulgated pursuant to Federal Statute 42 USC 7651 through 7651o (Title IV of the Act), both provisions shall apply, and both shall be state and federally enforceable.

6. Emergency Provisions

a. Pursuant to 401 KAR 52:020 Section 24(1), an emergency shall constitute an affirmative defense to an action brought for the noncompliance with the technology-based emission limitations if the permittee demonstrates through properly signed contemporaneous operating logs or relevant evidence that:

SECTION G – GENERAL CONDITIONS

i. An emergency occurred and the permittee can identify the cause of the emergency;
ii. The permitted facility was at the time being properly operated;
iii. During an emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and,
iv. Pursuant to 401 KAR 52:020, 401 KAR 50:055, and KRS 224.01-400, the permittee notified the Division as promptly as possible and submitted written notice of the emergency to the Division when emission limitations were exceeded due to an emergency. The notice shall include a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
v. This requirement does not relieve the source of other local, state or federal notification requirements.

b. Emergency conditions listed in General Condition 6(a) above are in addition to any emergency or upset provision(s) contained in an applicable requirement [401 KAR 52:020, Section 24(3)].

c. In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof [401 KAR 52:020, Section 24(2)].

7. Risk Management Provisions

a. The permittee shall comply with all applicable requirements of 401 KAR Chapter 68, Chemical Accident Prevention, which incorporates by reference 40 CFR Part 68, Risk Management Plan provisions. If required, the permittee shall comply with the Risk Management Program and submit a Risk Management Plan to:

RMP Reporting Center
P.O. Box 3346
Merrifield, VA, 22116-3346

b. If requested, the permittee shall submit additional relevant information to the Division or the U.S. EPA.

8. Ozone Depleting Substances

a. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
i. Persons opening appliances for maintenance, service, repair, or disposal shall comply with the required practices contained in 40 CFR 82.156.

SECTION G – GENERAL CONDITIONS

ii. Equipment used during the maintenance, service, repair, or disposal of appliances shall comply with the standards for recycling and recovery equipment contained in 40 CFR 82.158.

iii. Persons performing maintenance, service, repair, or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.

iv. Persons disposing of small appliances, MVACs, and MVAC-like appliances (as defined at 40 CFR 82.152) shall comply with the Recordkeeping requirements pursuant to 40 CFR 82.166.

v. Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156.

vi. Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.

b. If the permittee performs service on motor (fleet) vehicle air conditioners containing ozone-depleting substances, the source shall comply with all applicable requirements as specified in 40 CFR 82, Subpart B, *Servicing of Motor Vehicle Air Conditioners*.

SECTION H – ALTERNATE OPERATION SCENARIOS

None

SECTION I – COMPLIANCE SCHEDULE

None